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Application No. 10/687799

Docket No. GMI-055

Inventor: Jessica TEELING et al.

Title: HUMAN MONOCLONAL ANTIBODIES AGAINST CD20

Figure 1 of 65

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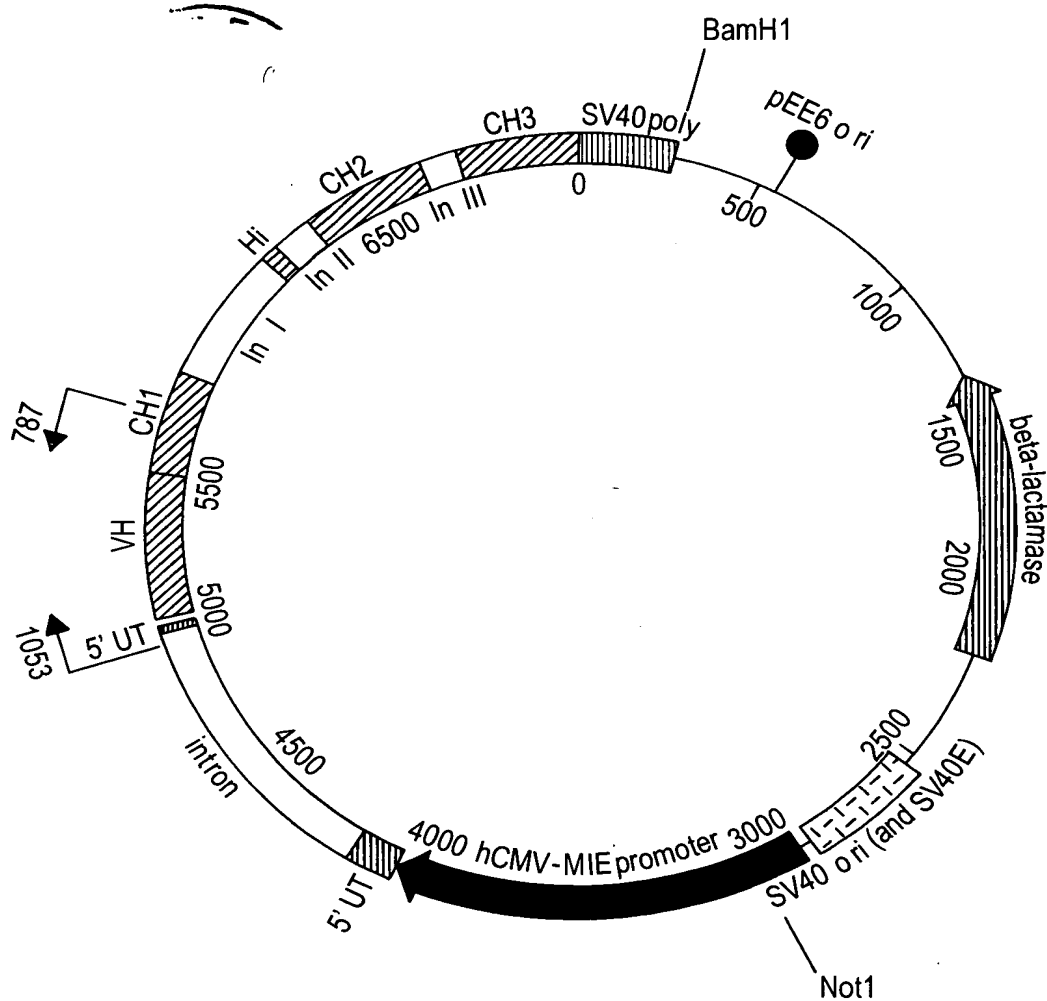
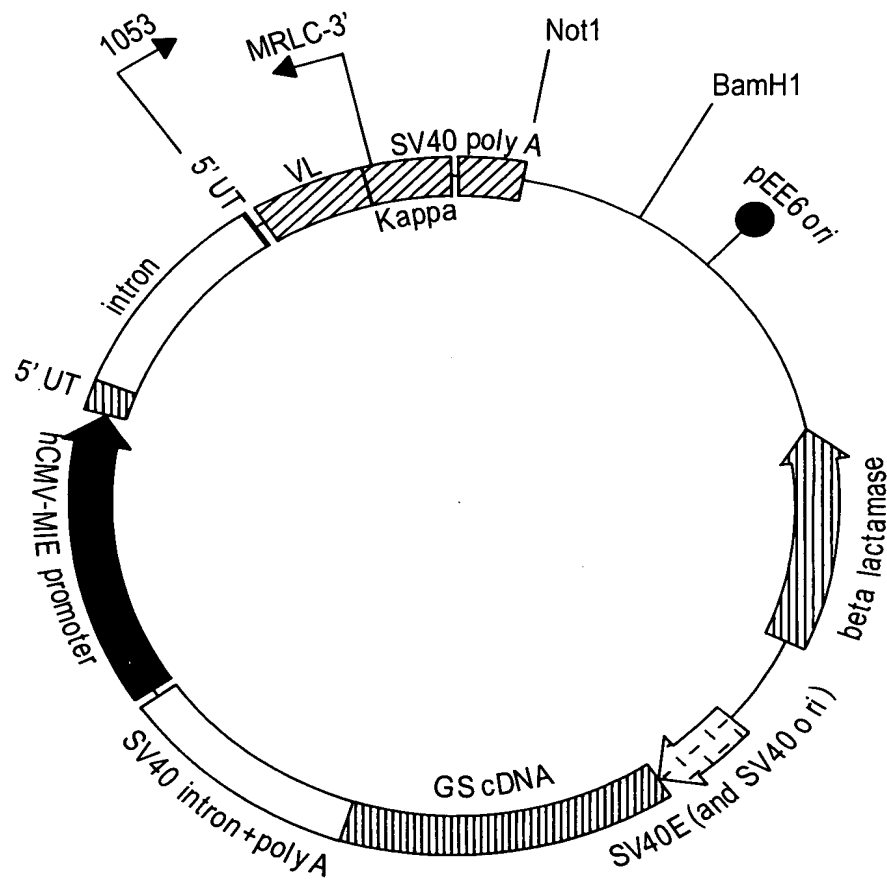


Fig. 1

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*Fig. 2*

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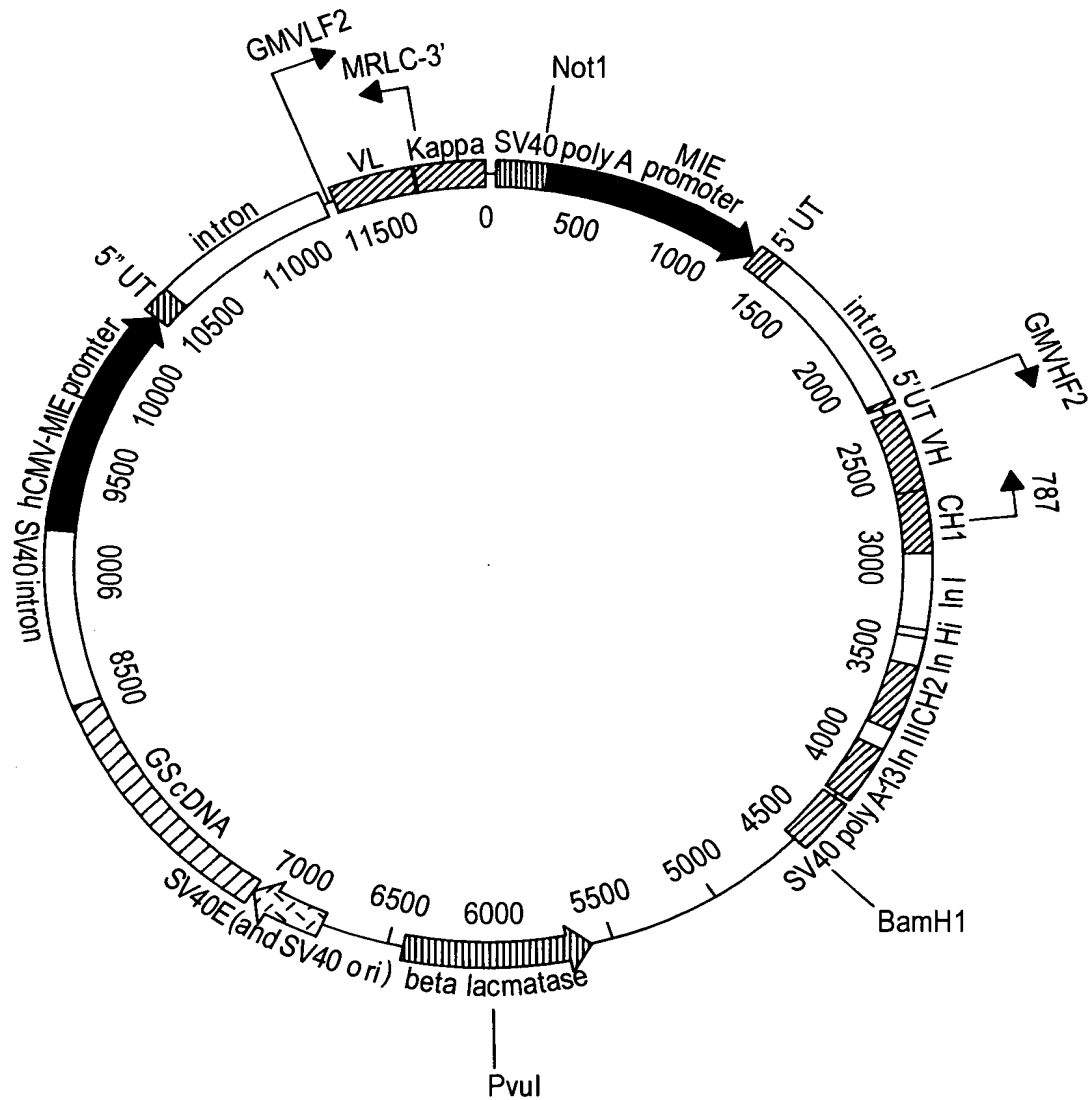


Fig. 3

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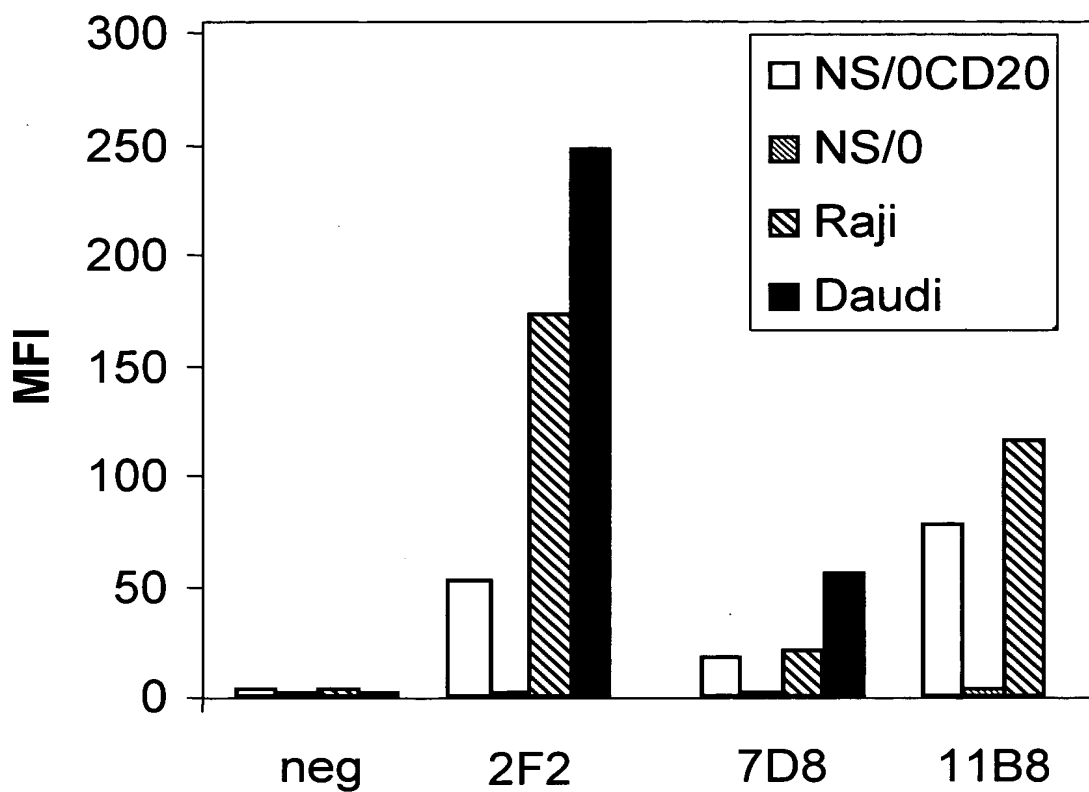


Fig. 4

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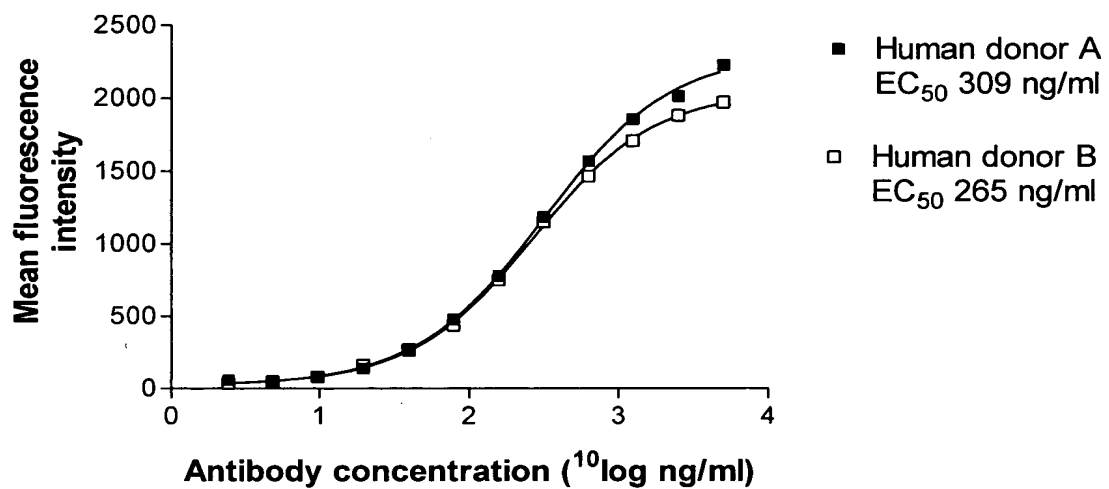


Fig. 5A

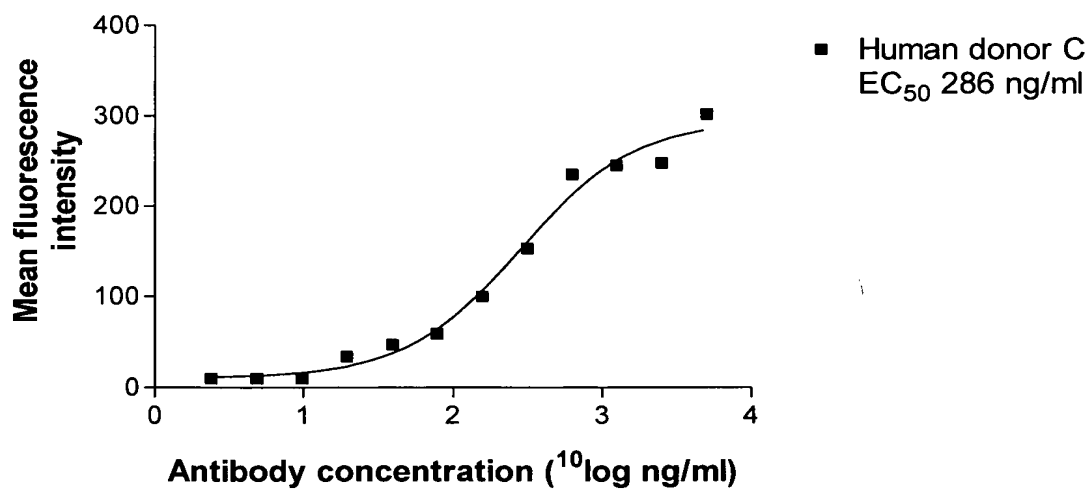
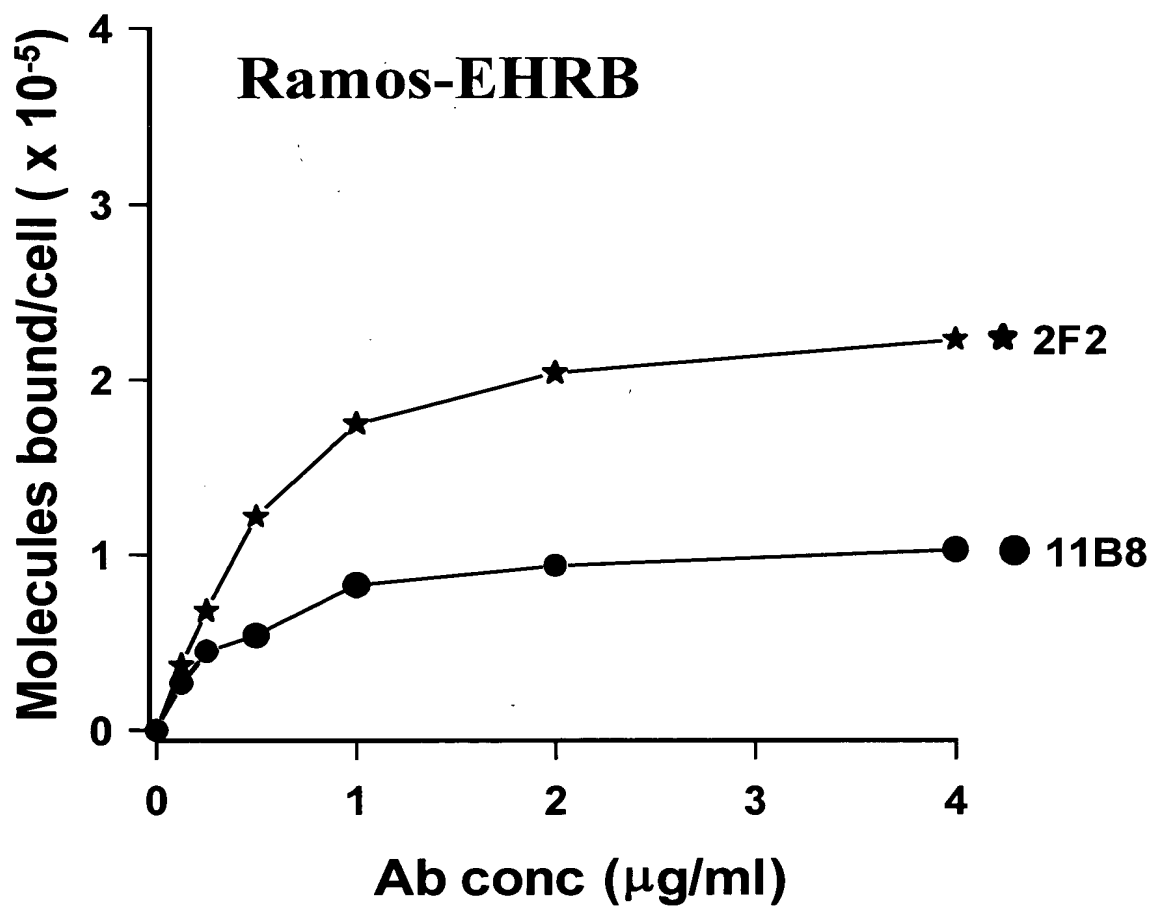


Fig. 5B

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*Fig 6*

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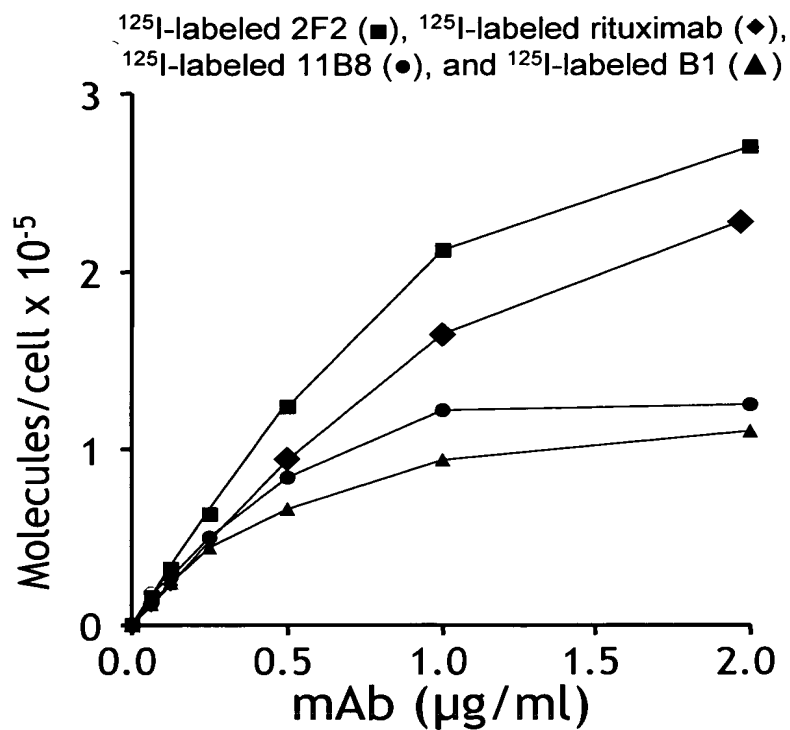


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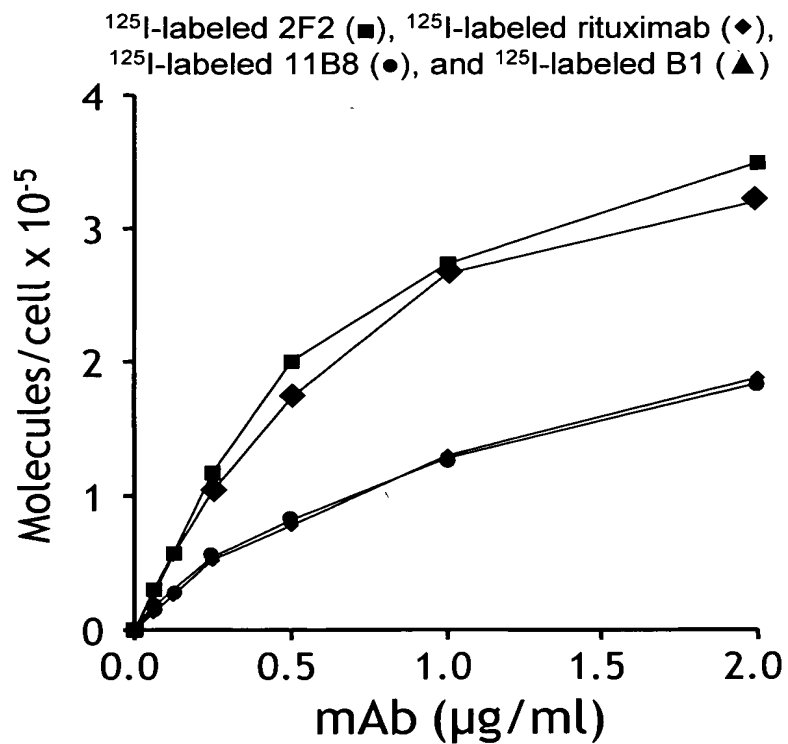


Fig. 7B

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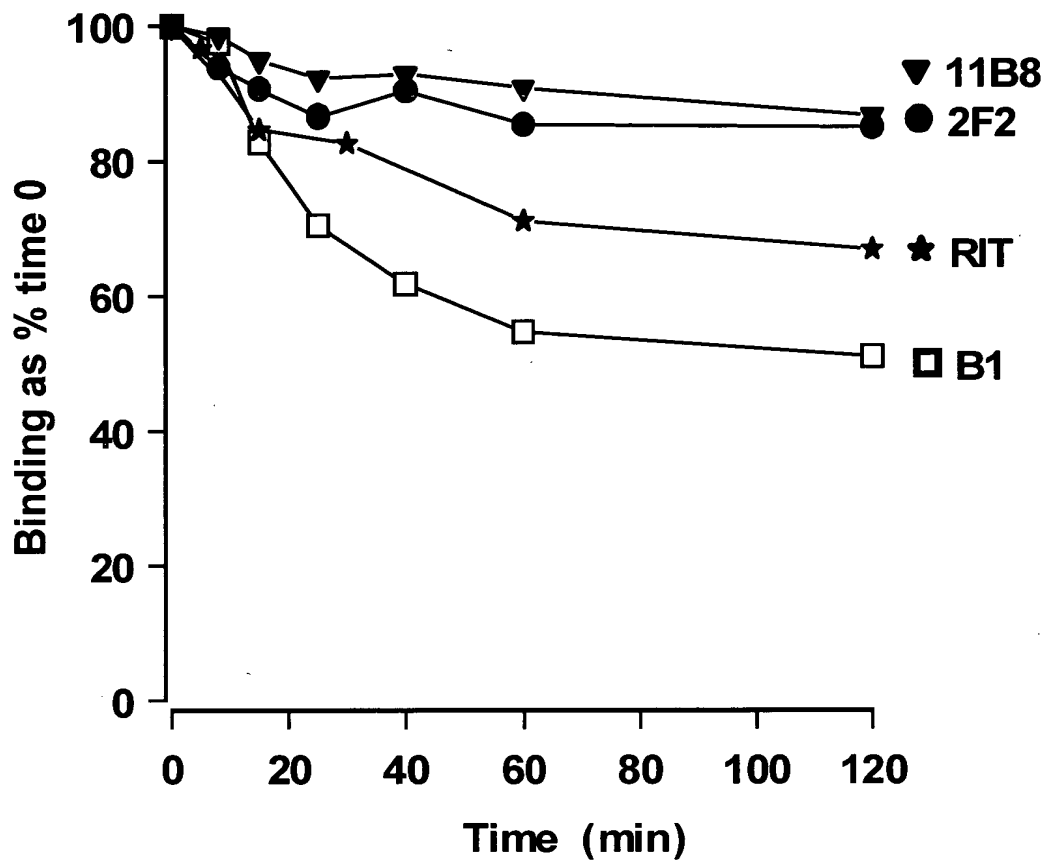


Fig. 8

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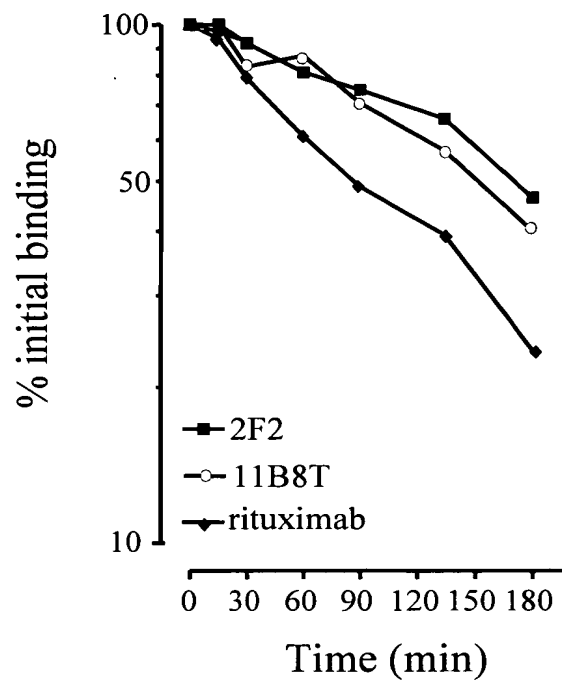


Fig. 9

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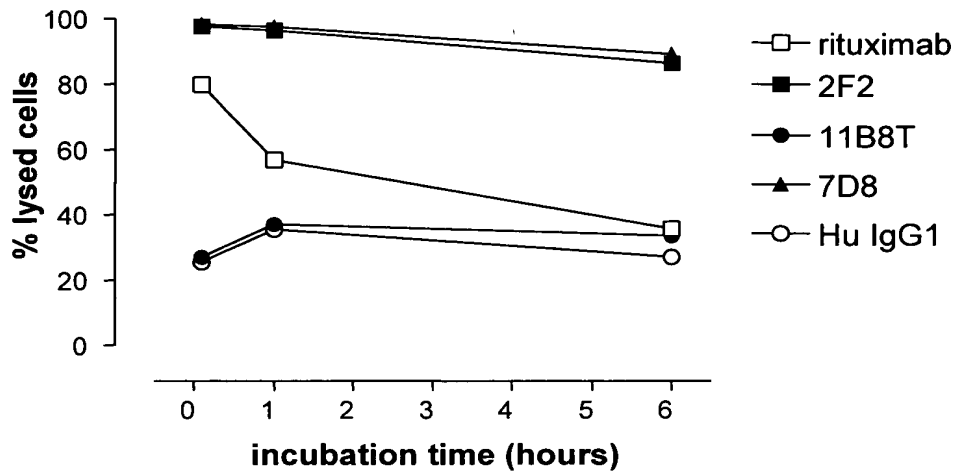


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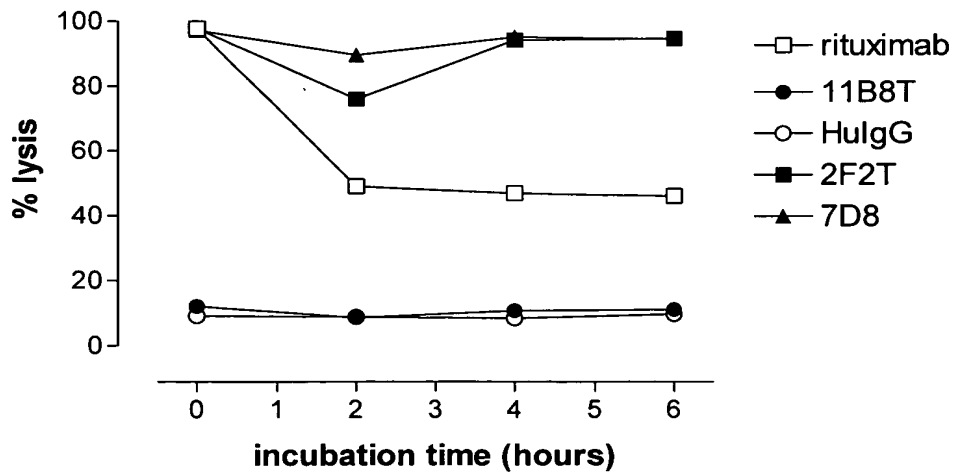


Fig. 10B

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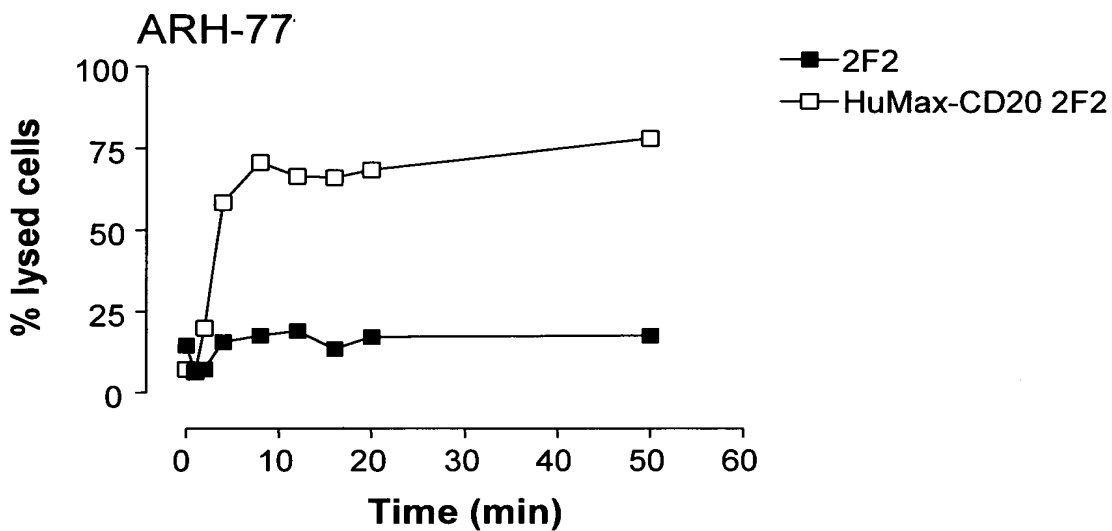


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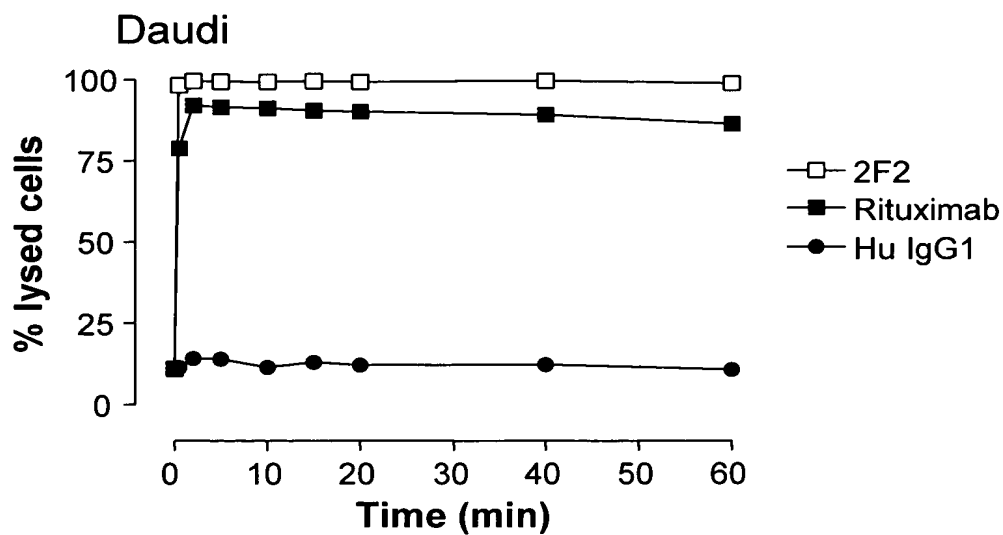
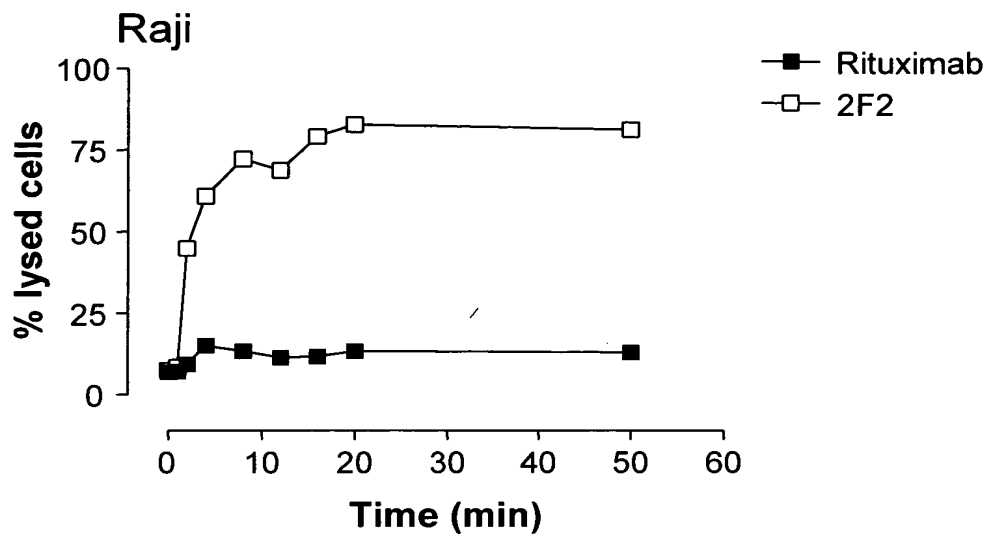
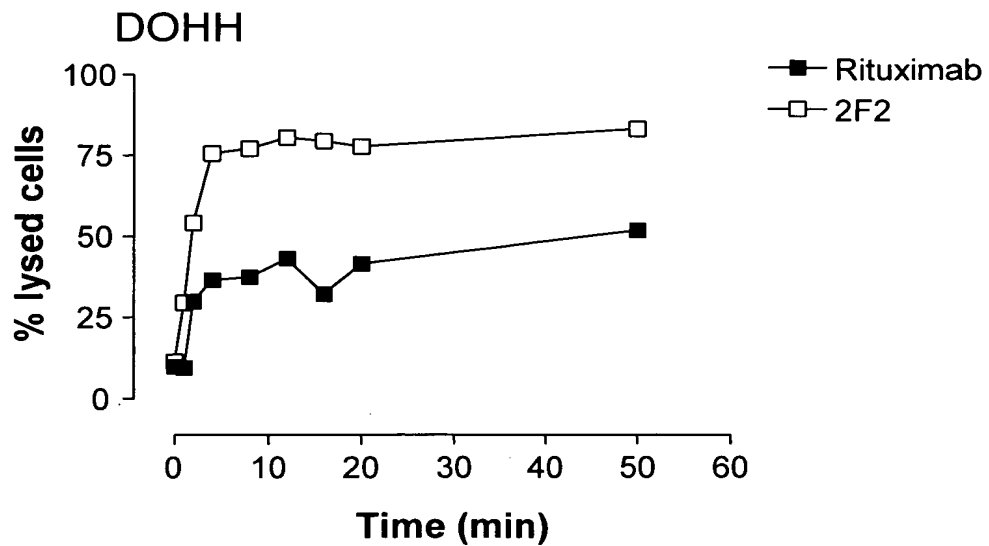
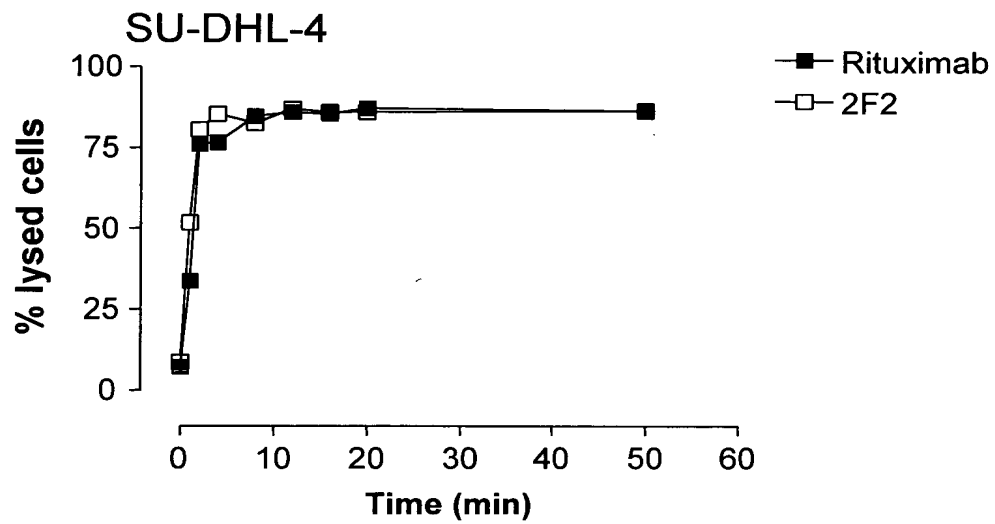


Fig. 11A

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*Fig. 11C**Fig. 11D*

13/65*Fig. 11E*

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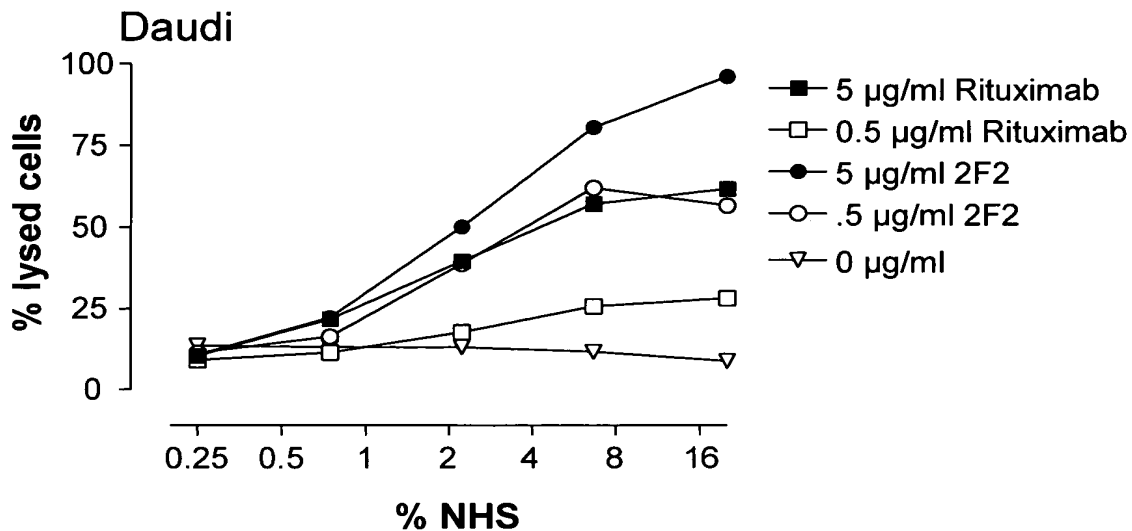


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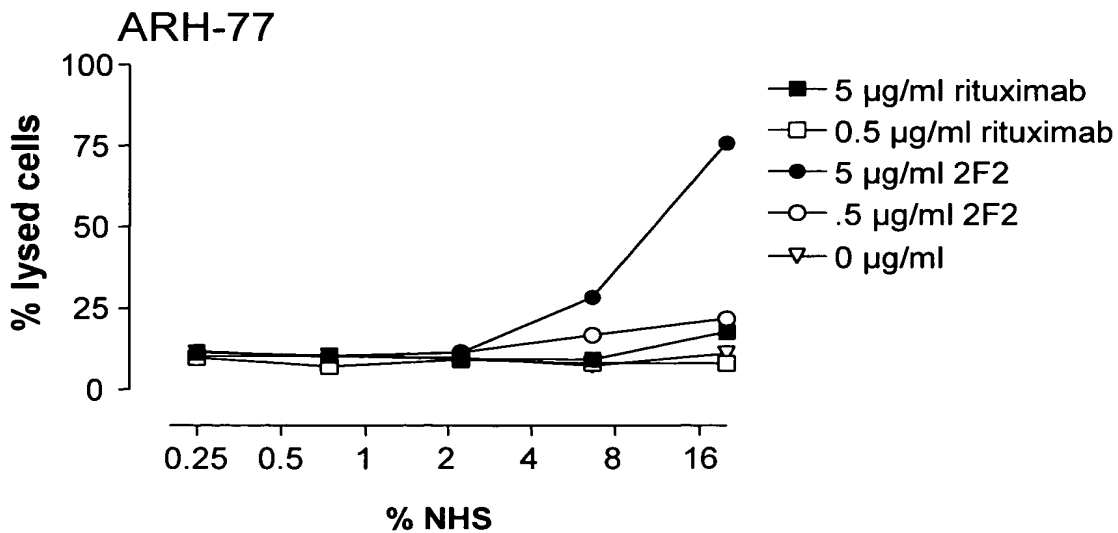


Fig. 12B

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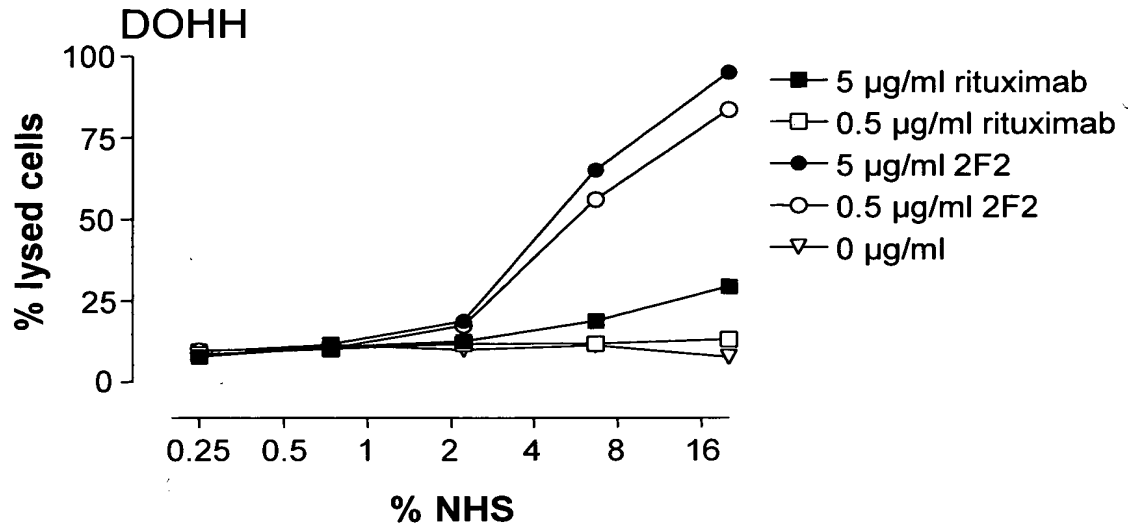


Fig. 12C

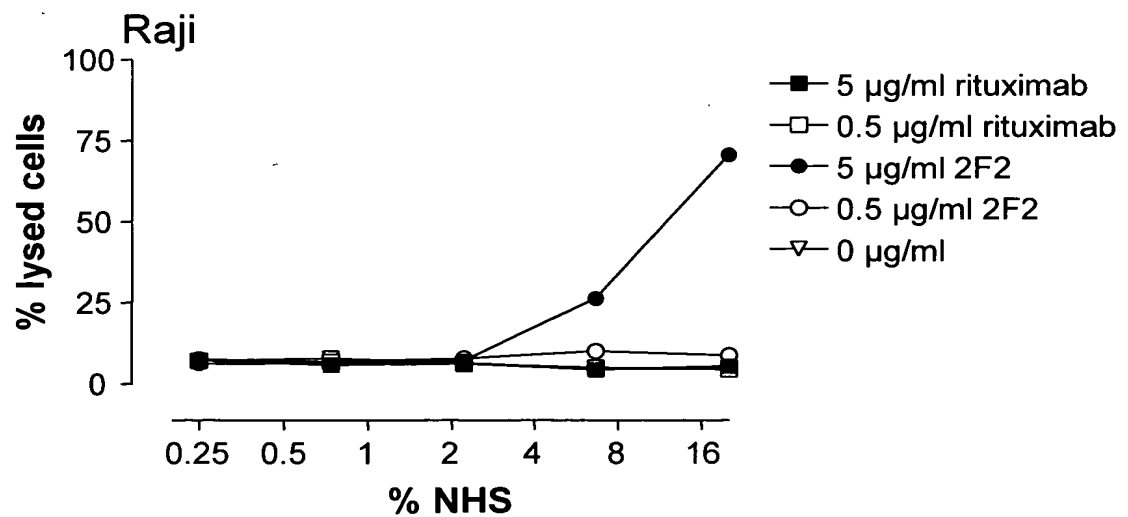


Fig. 12D

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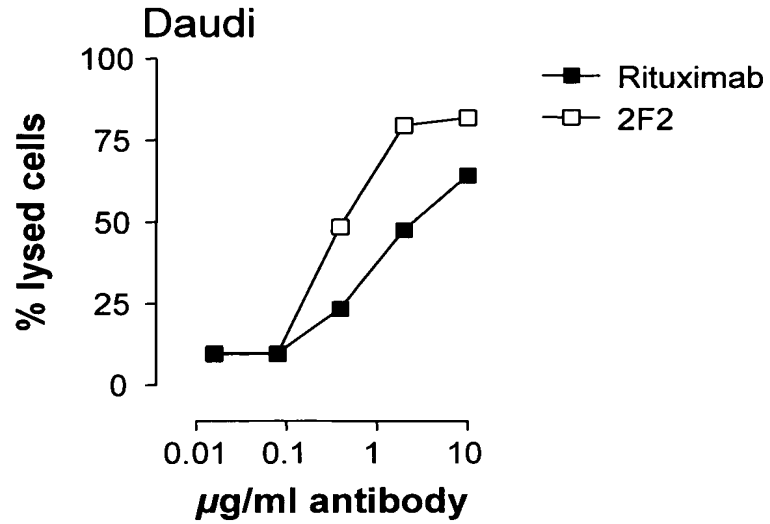


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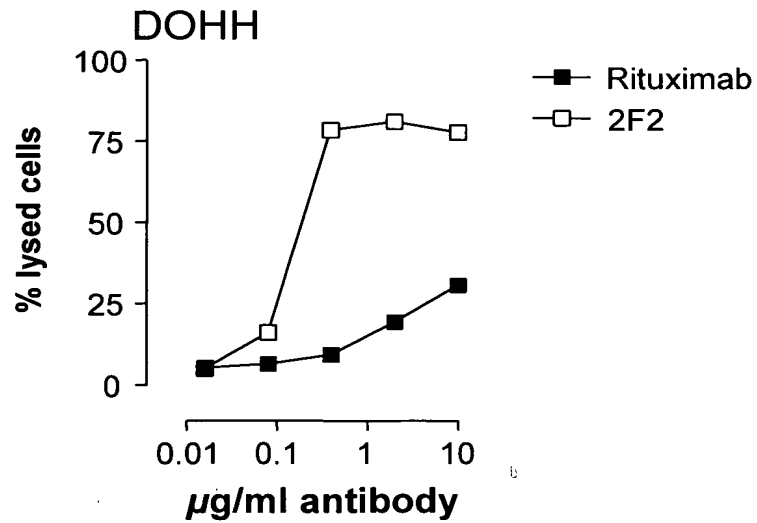
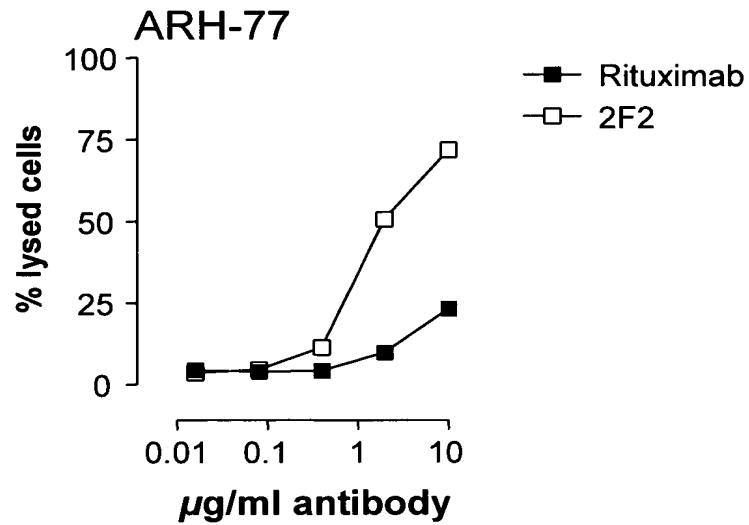
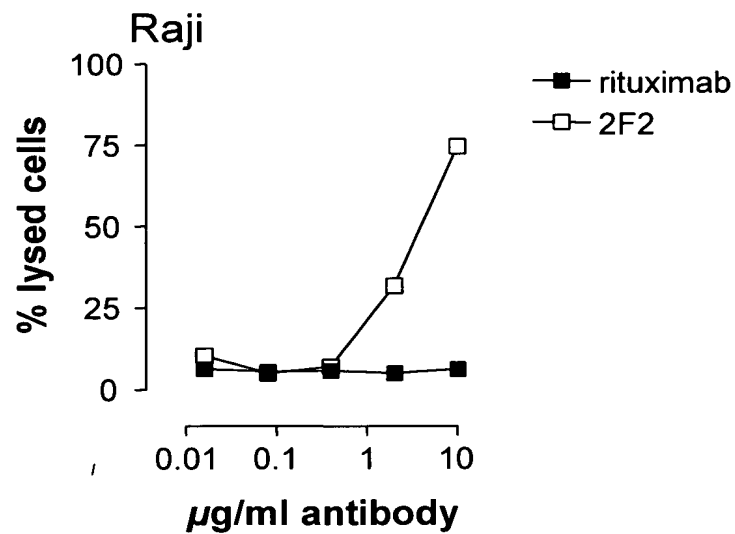


Fig. 13B

17/65*Fig. 13C**Fig. 13D*

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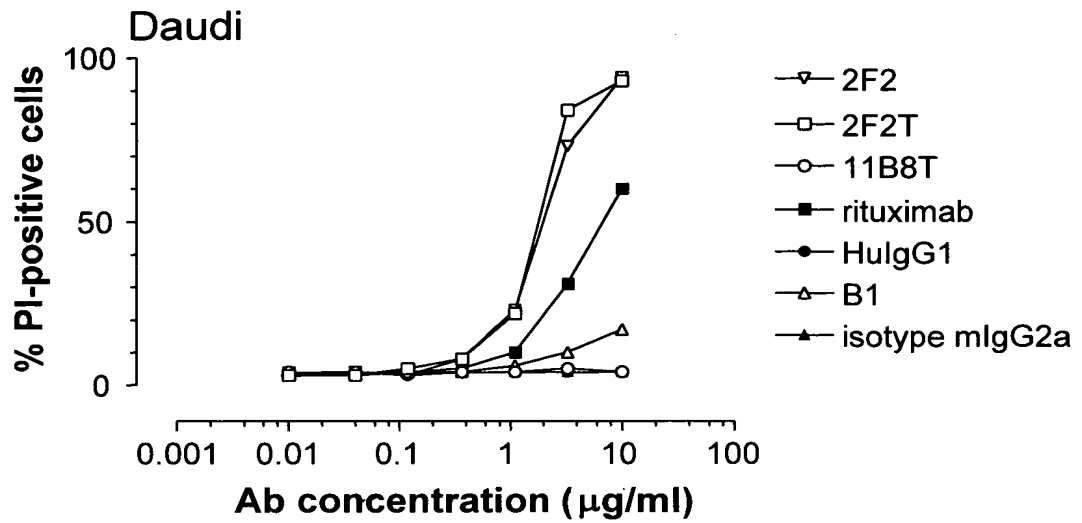


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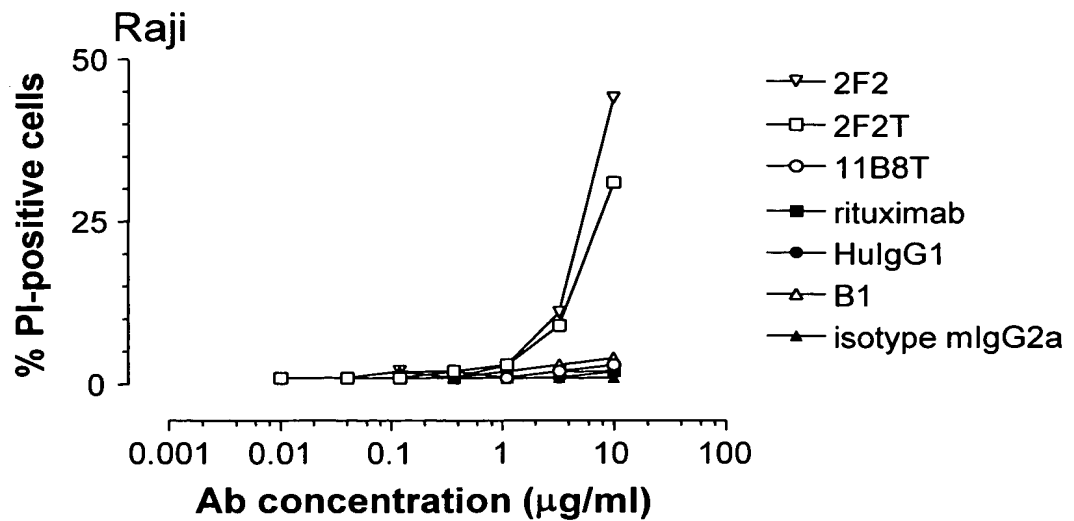


Fig. 14B

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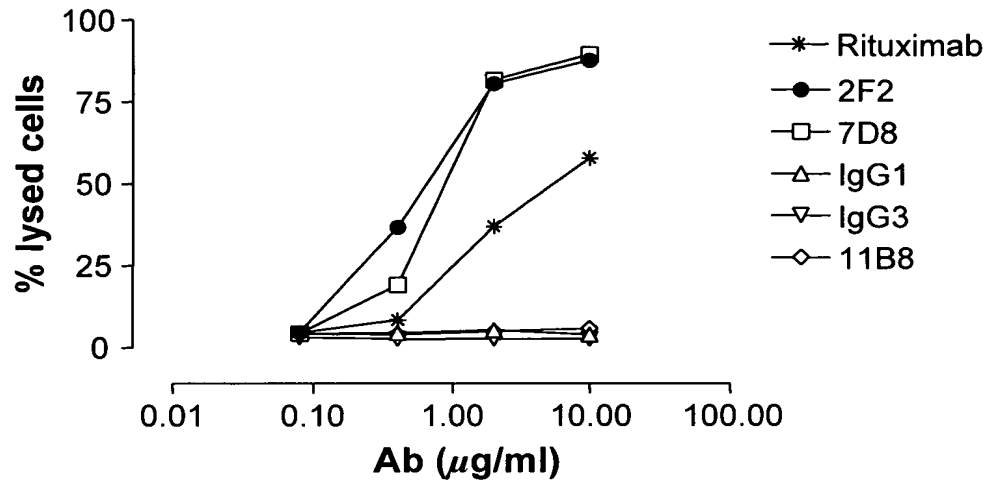


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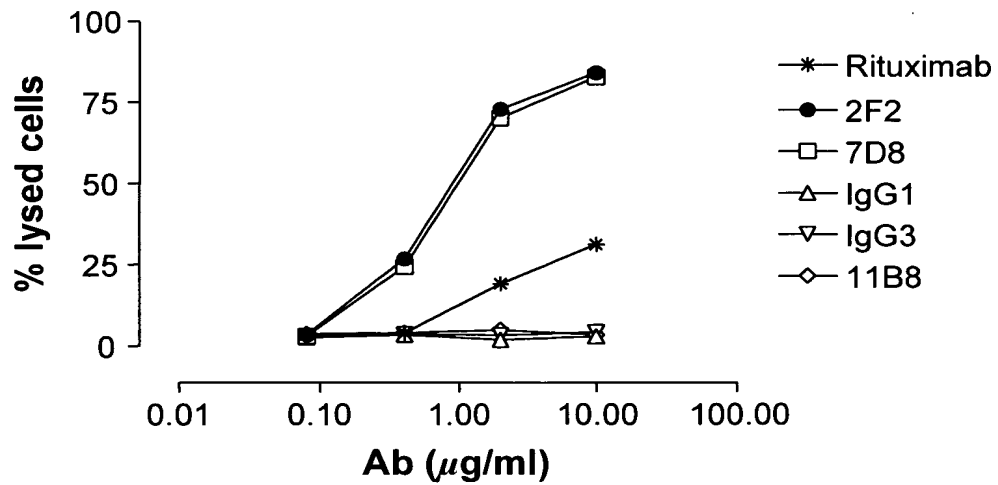


Fig. 15B

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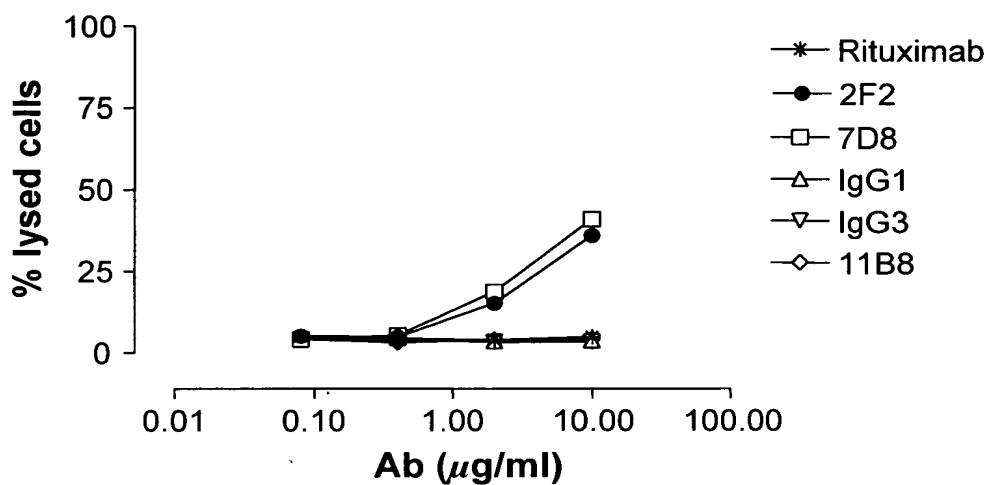


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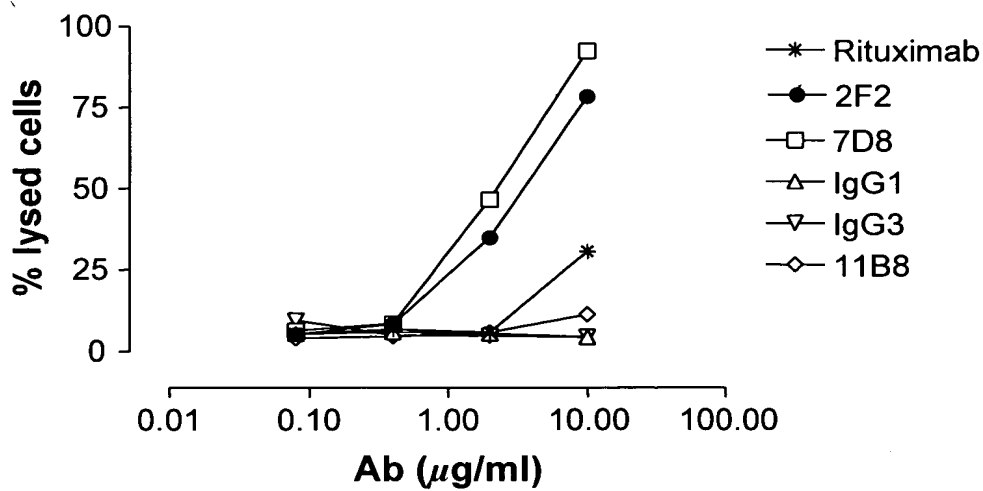


Fig. 16B

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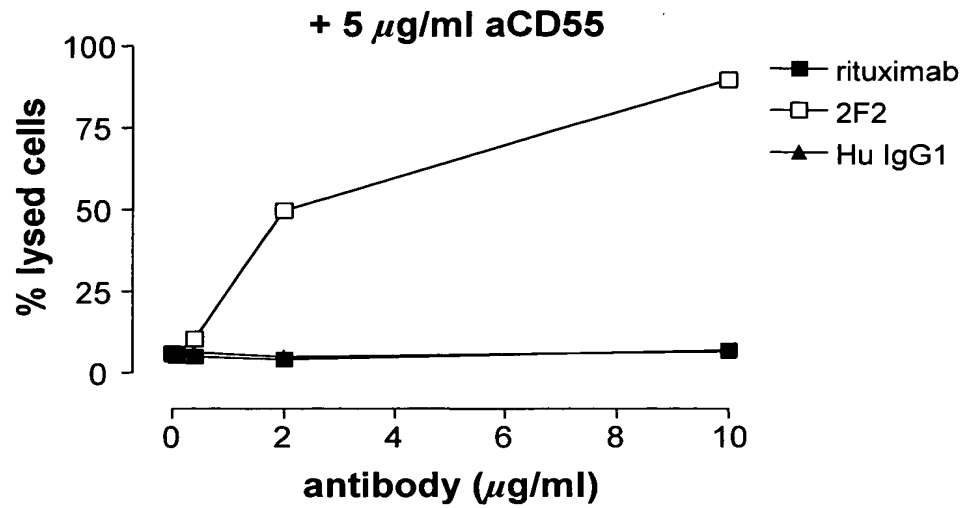


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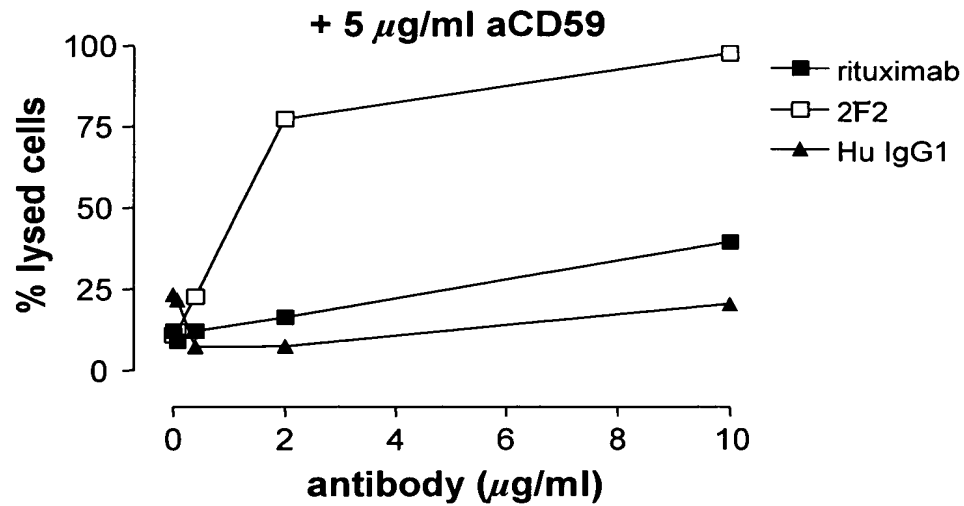
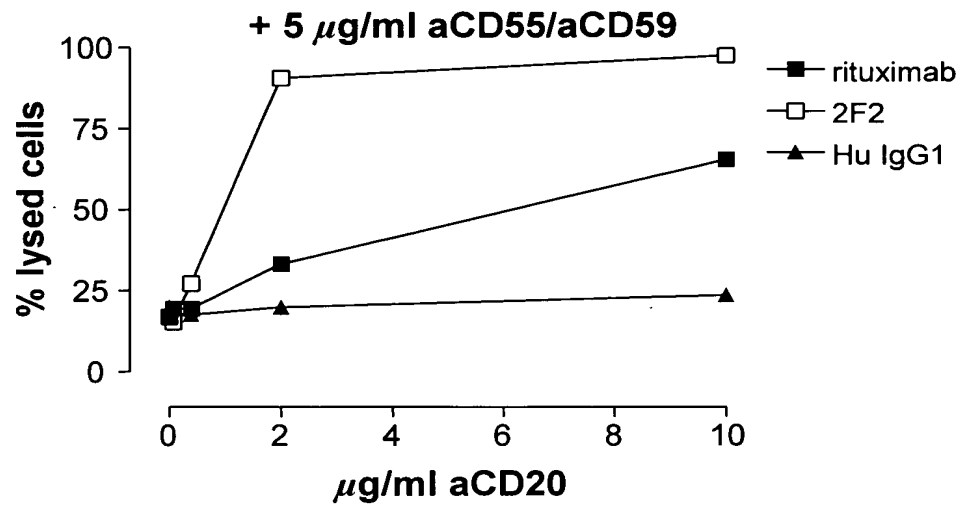


Fig. 17B

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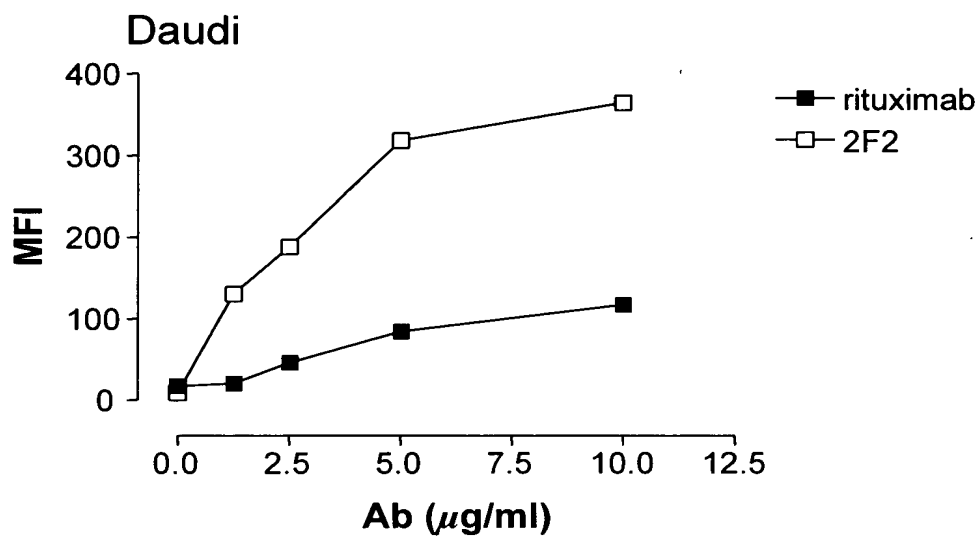


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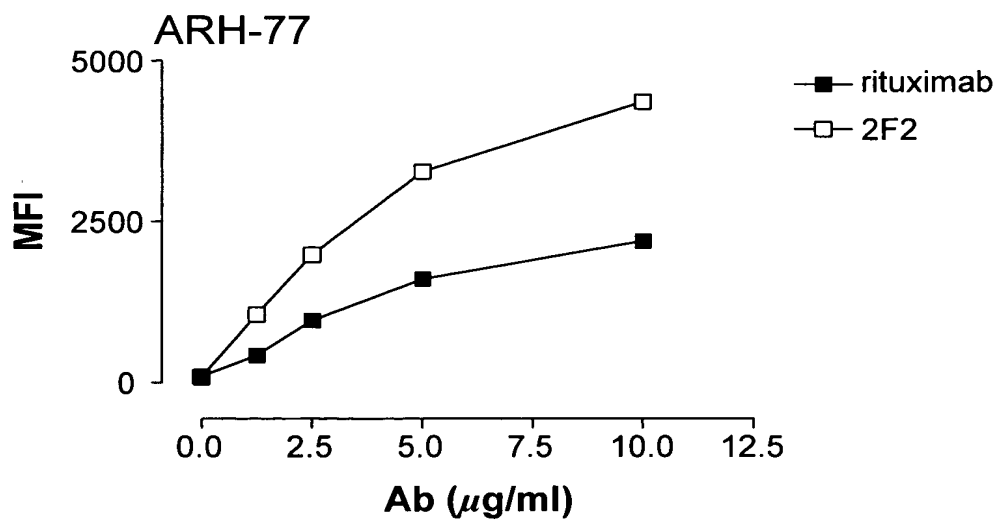
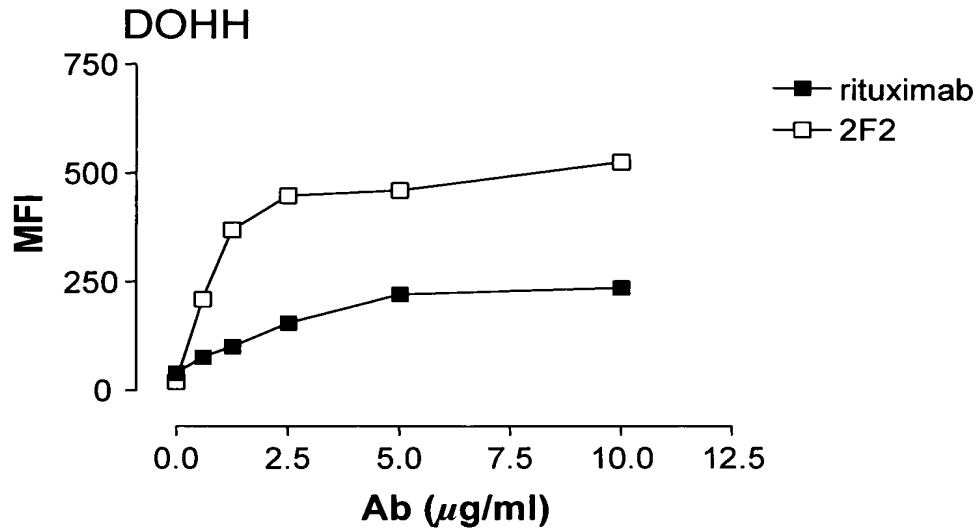
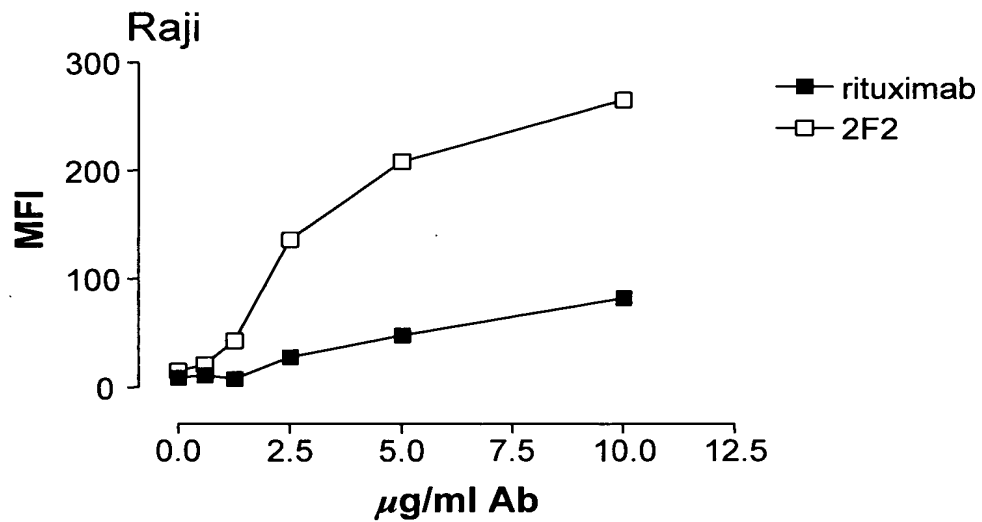


Fig. 18B

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*Fig. 18C**Fig. 18D*

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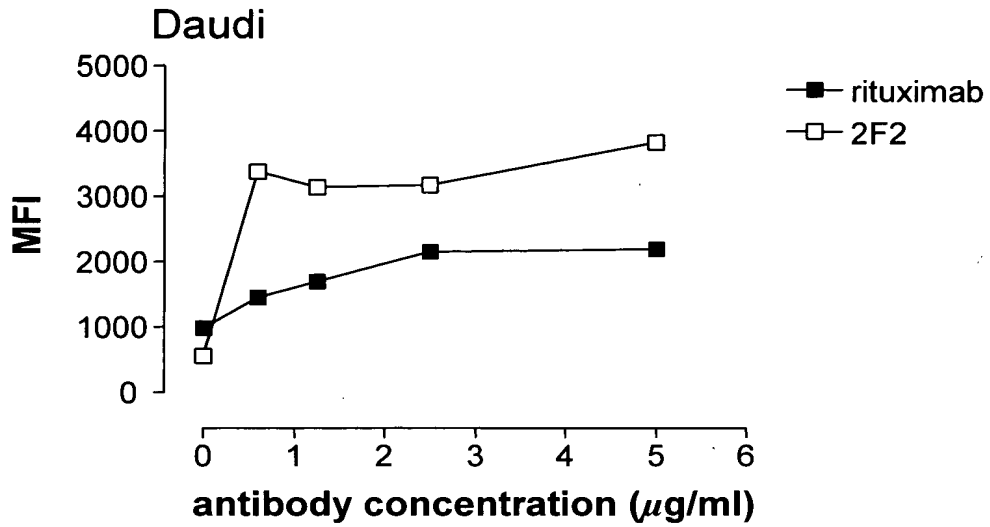


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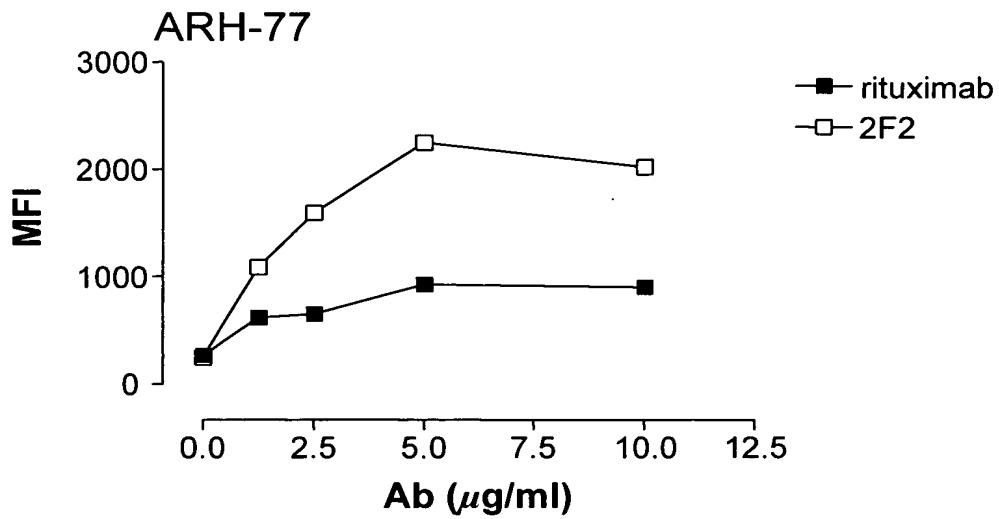


Fig. 19B

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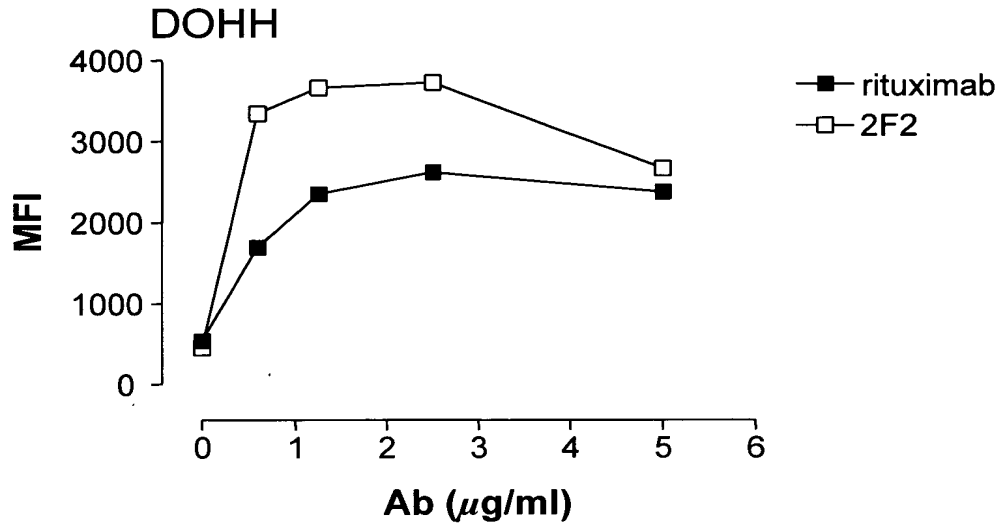


Fig. 19C

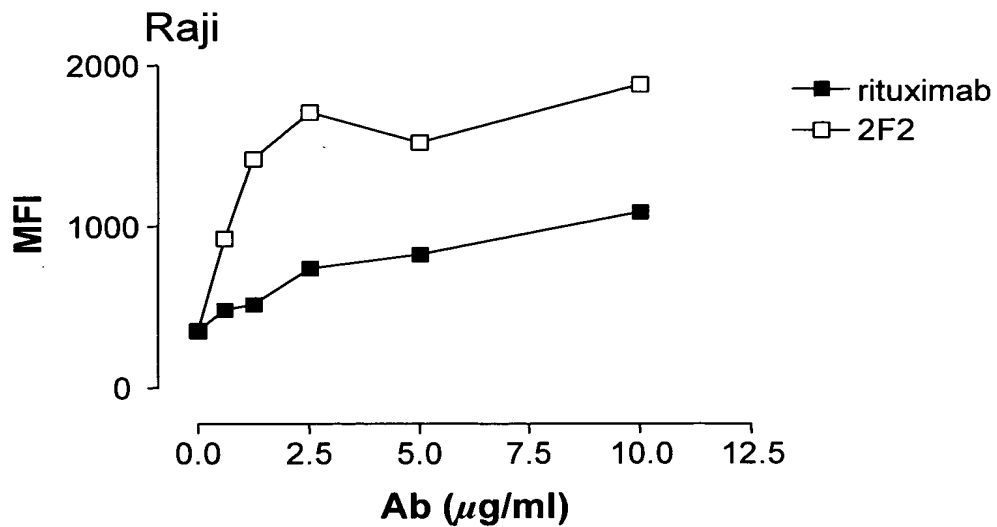


Fig. 19D

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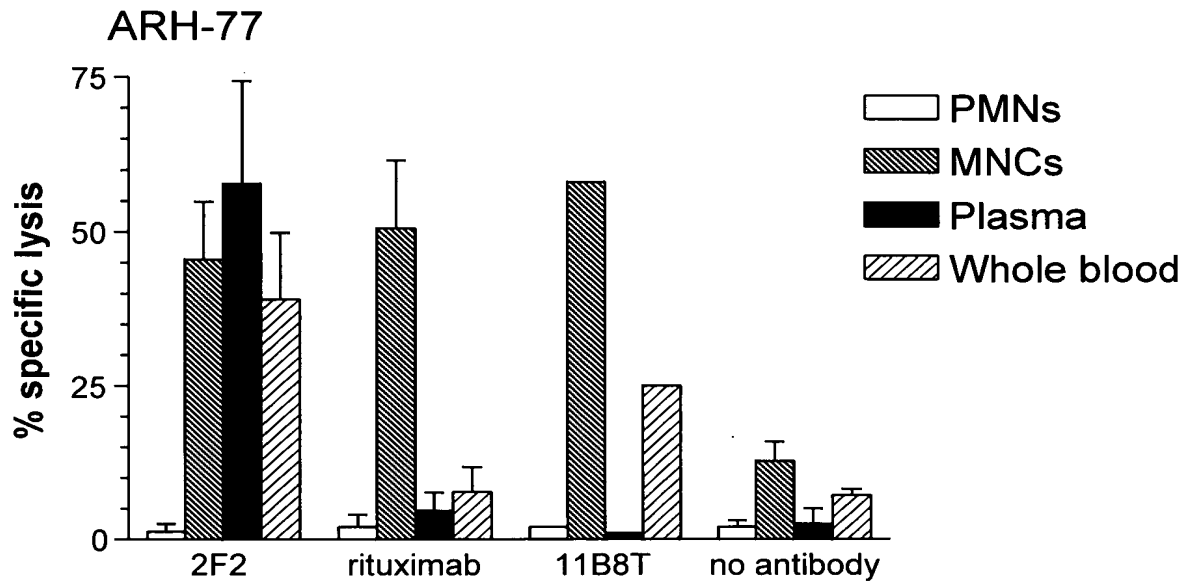


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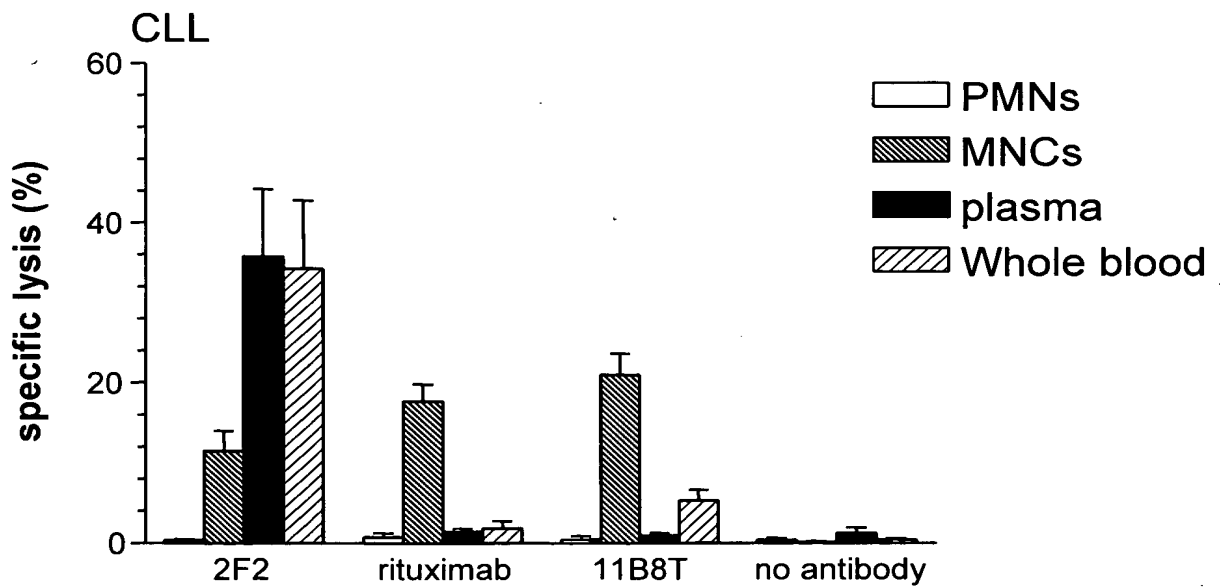


Fig. 21

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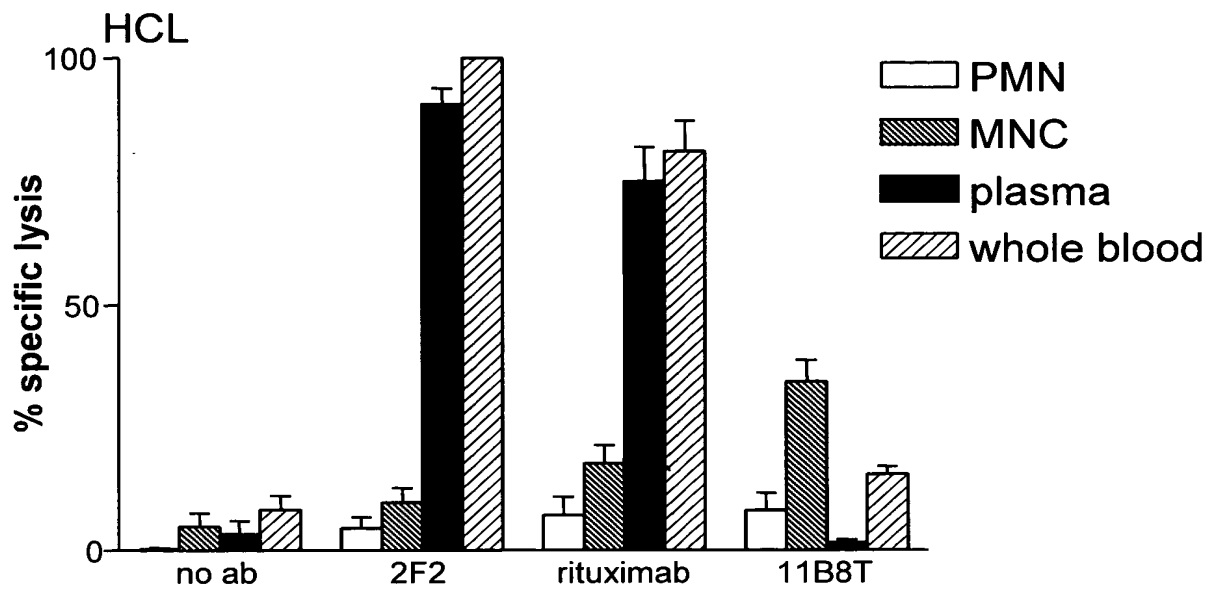


Fig. 22

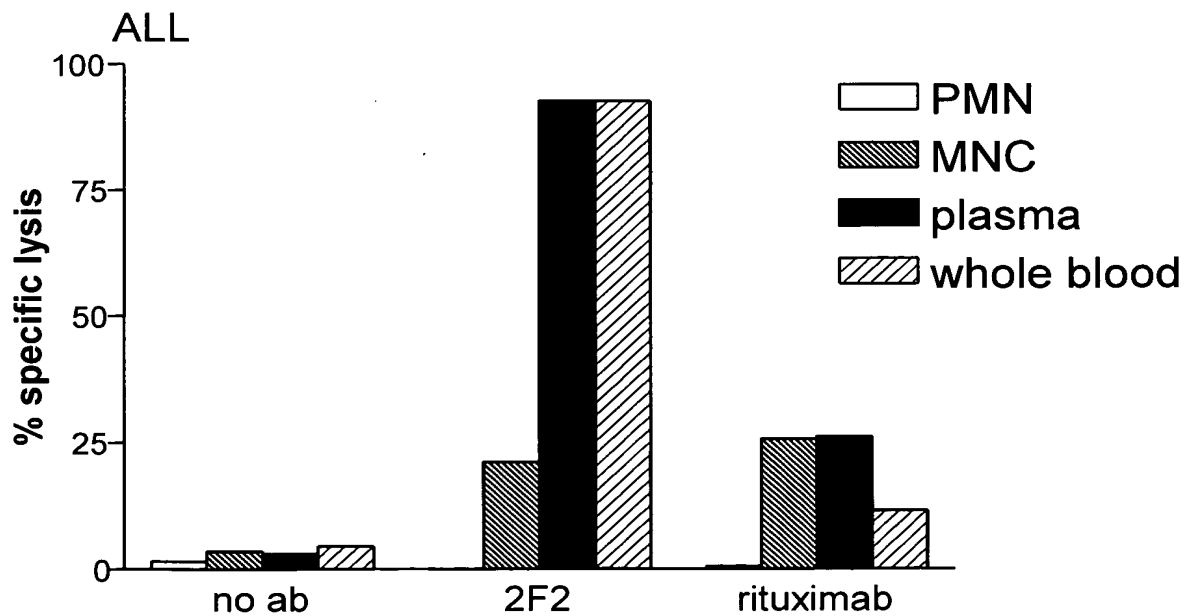
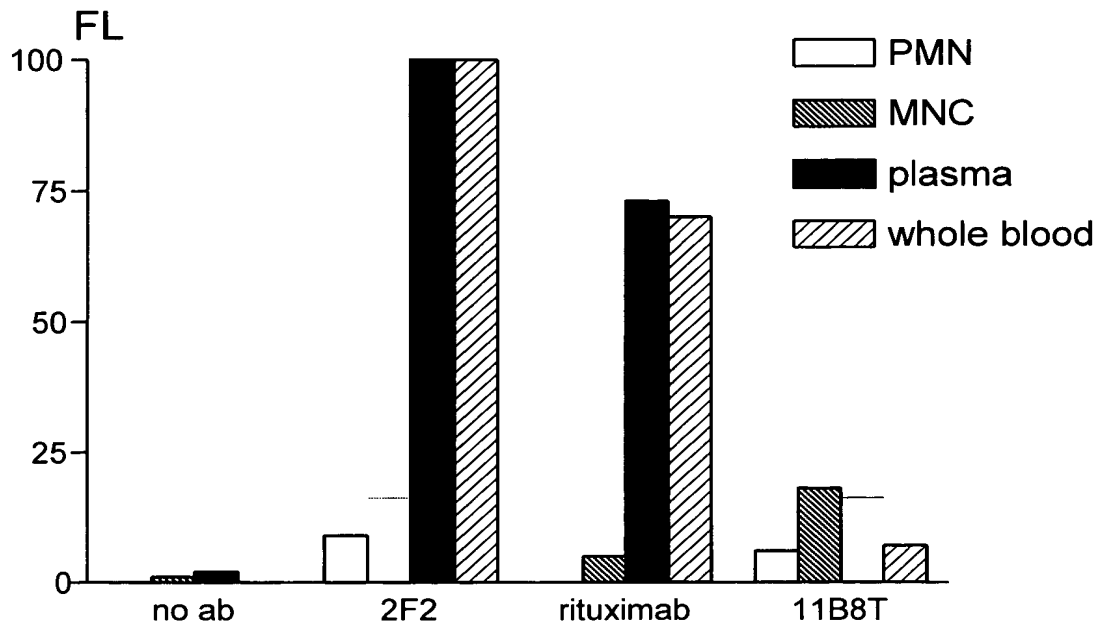
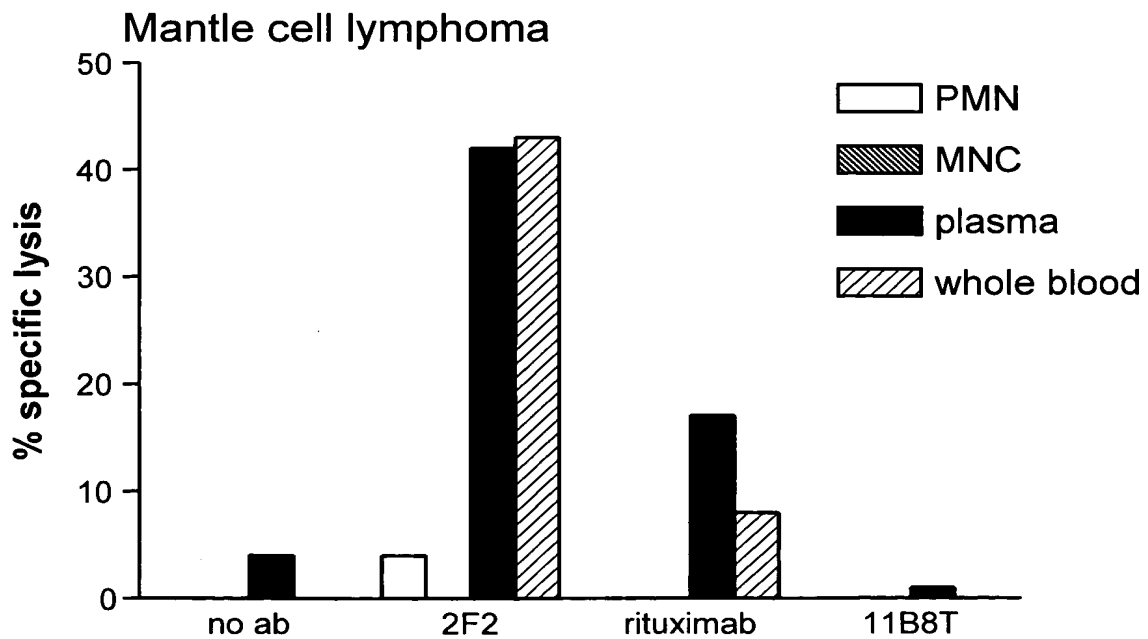


Fig. 23

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*Fig. 24**Fig. 25*

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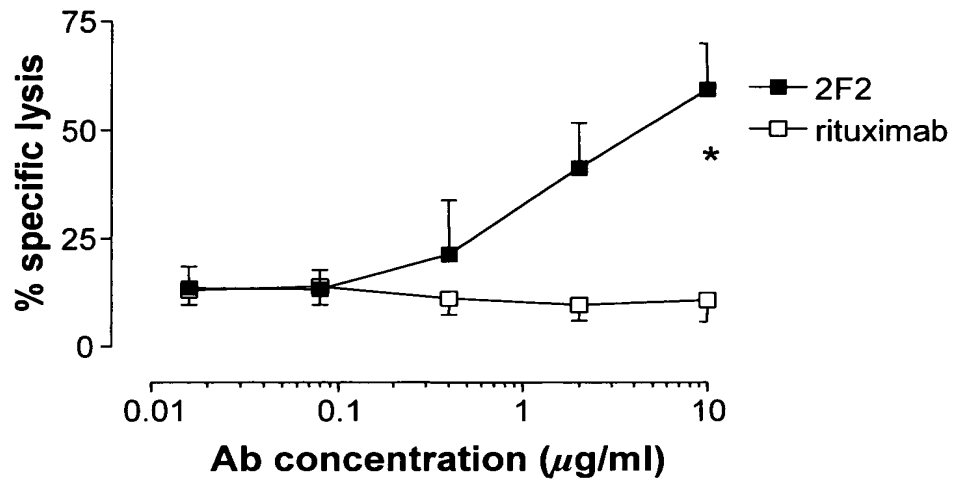


Fig. 26

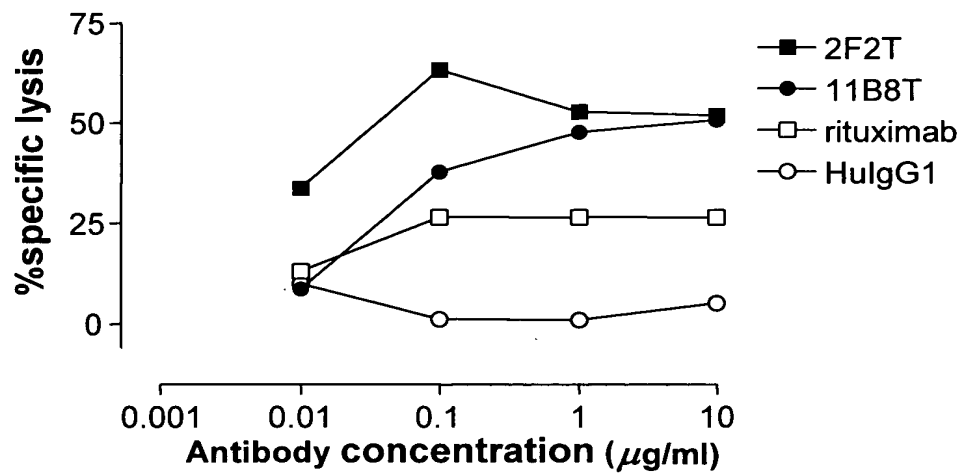
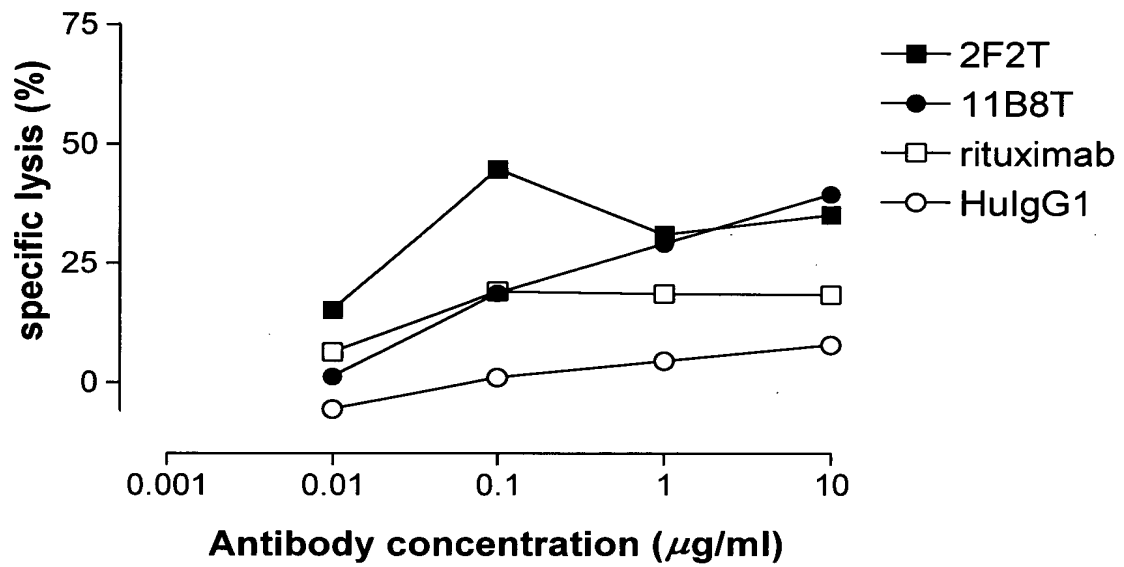
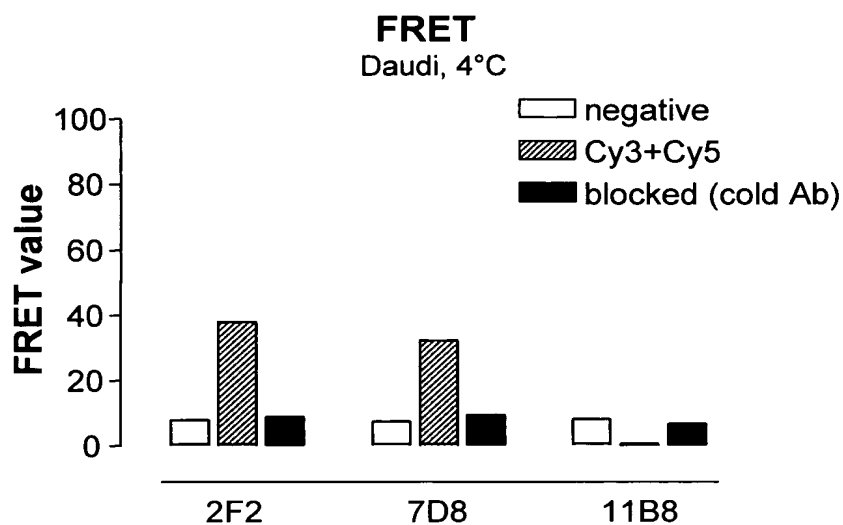
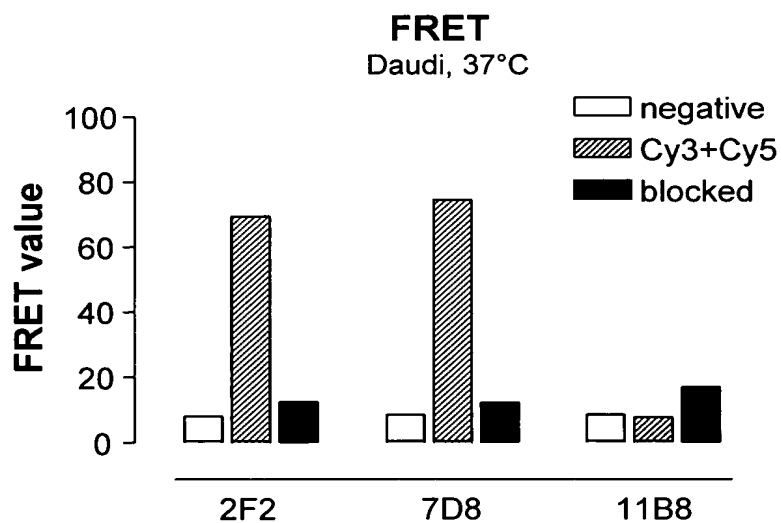


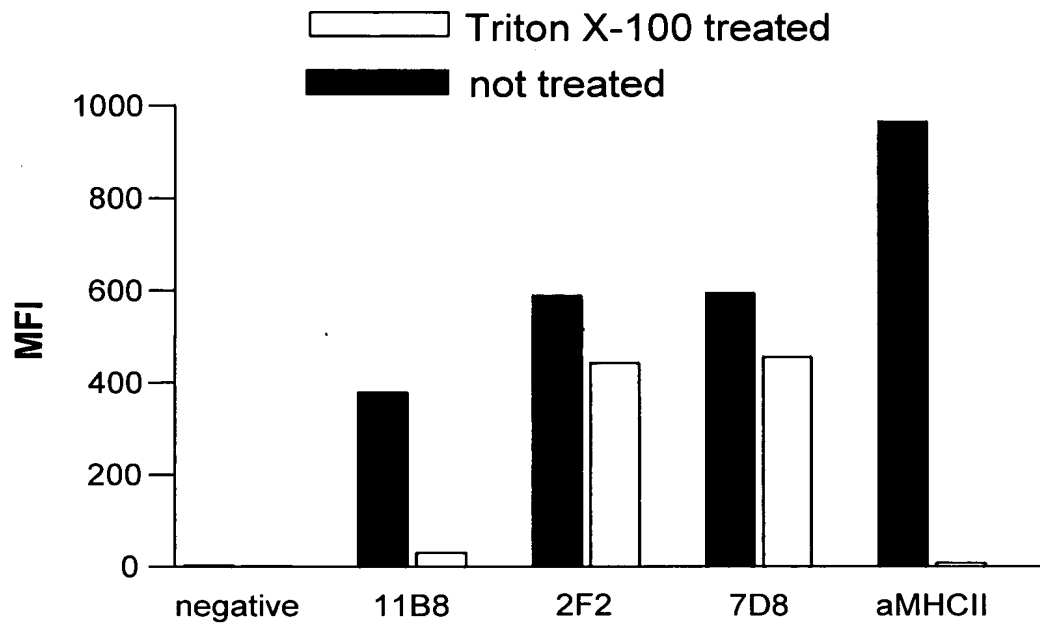
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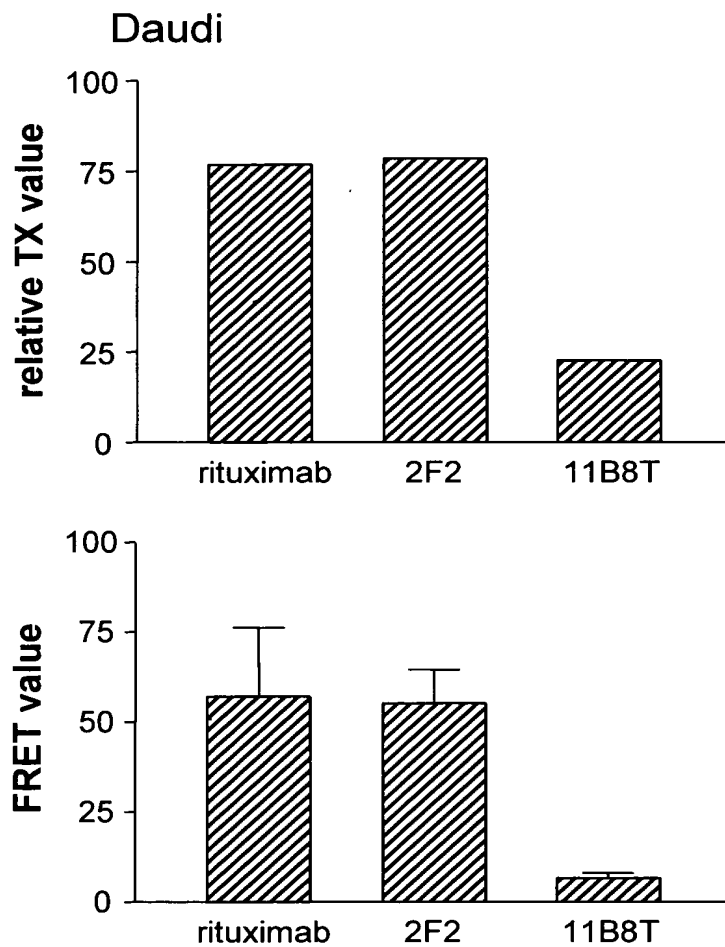
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*Fig. 28*

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*Fig. 29A**Fig. 29B*

33/65*Fig. 29C*

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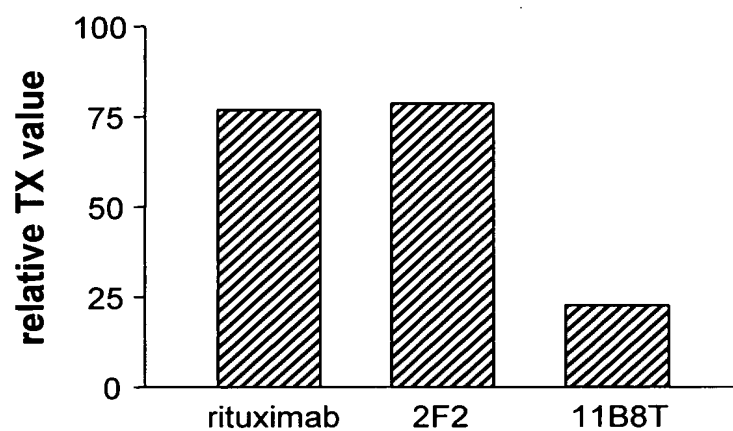


Fig. 31

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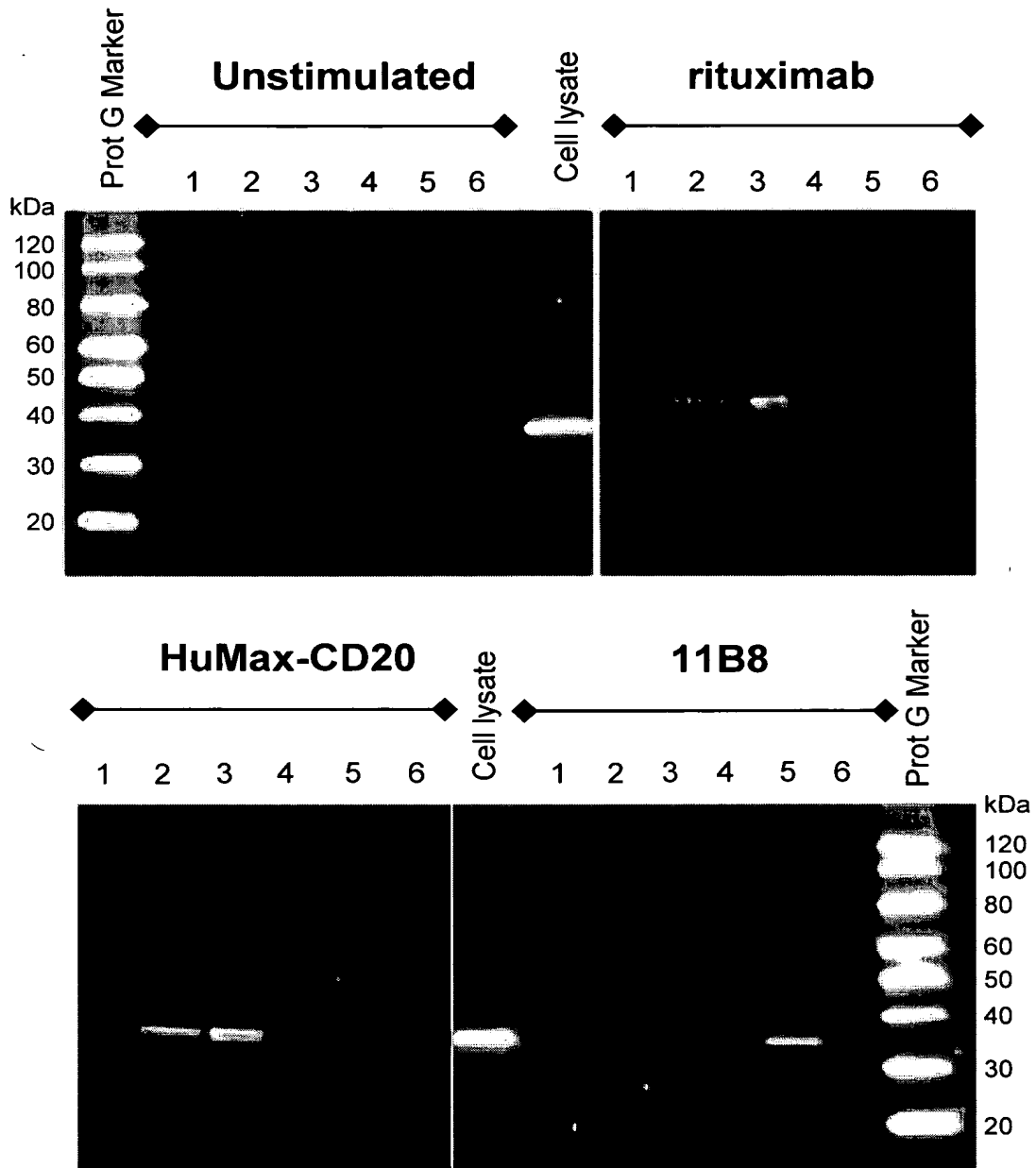


Fig. 32

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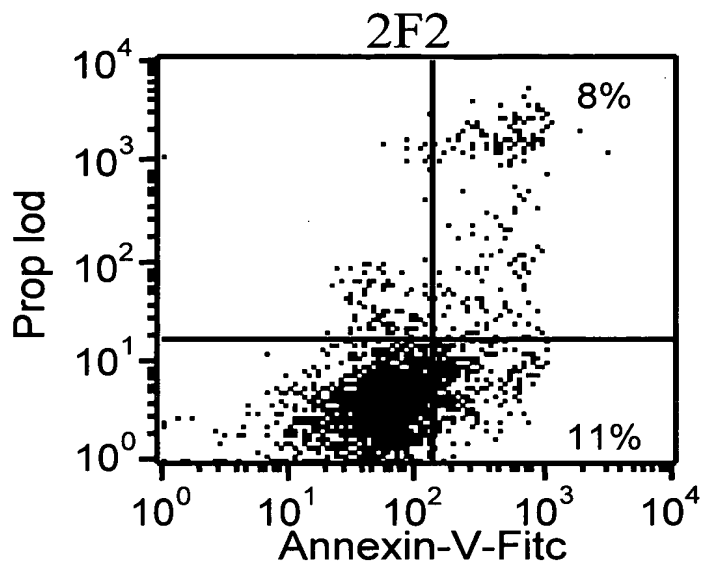


Fig. 33A

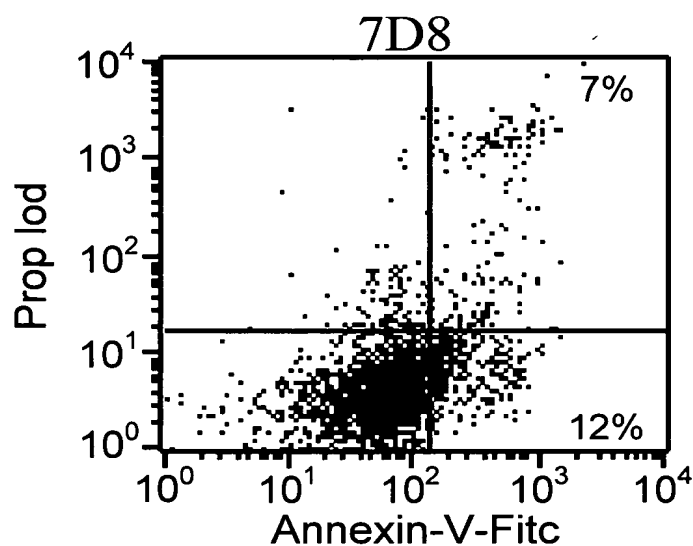


Fig. 33B

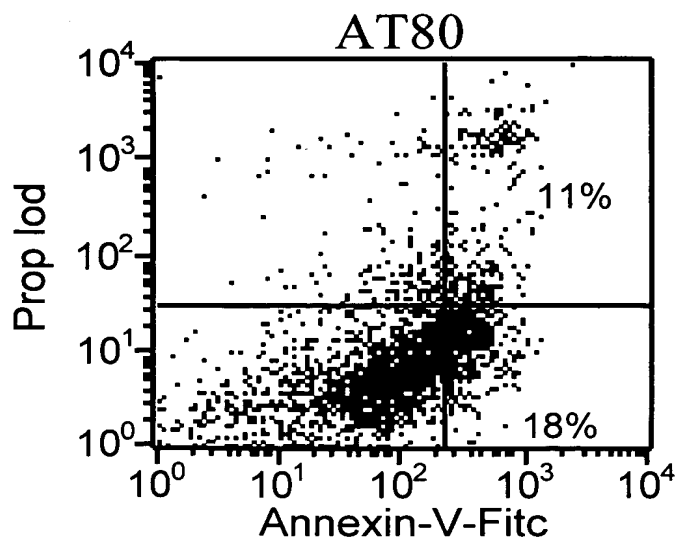
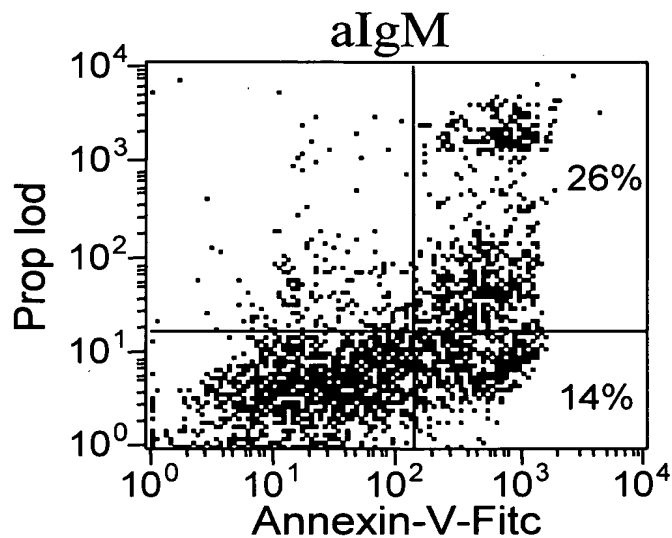
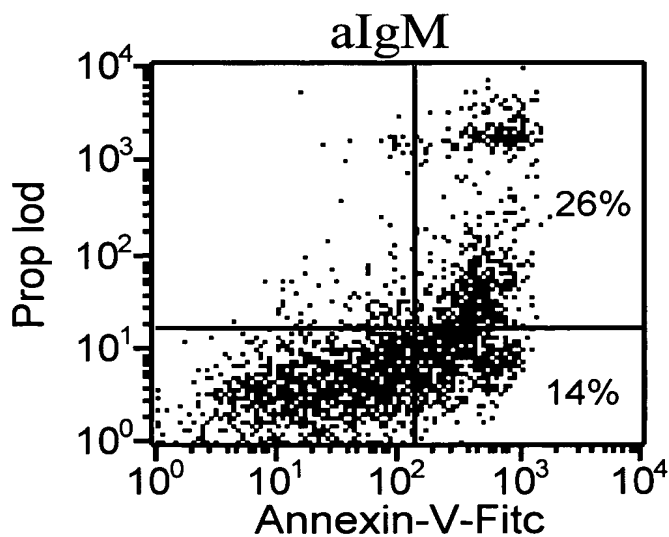
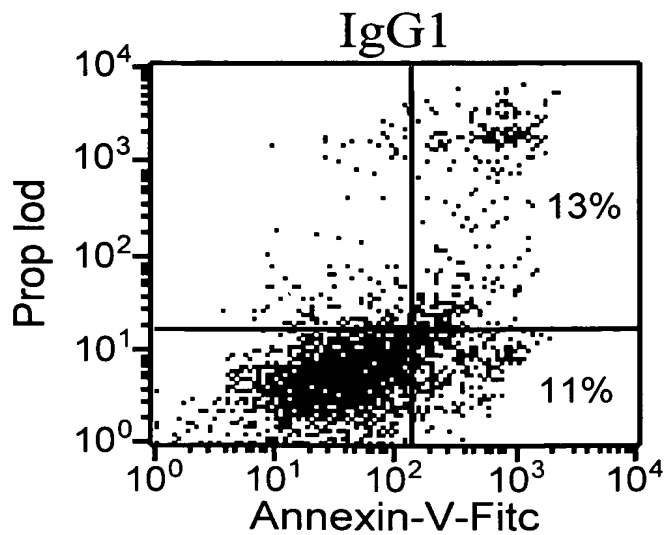


Fig. 33C

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*Fig. 33D**Fig. 33E**Fig. 33F*

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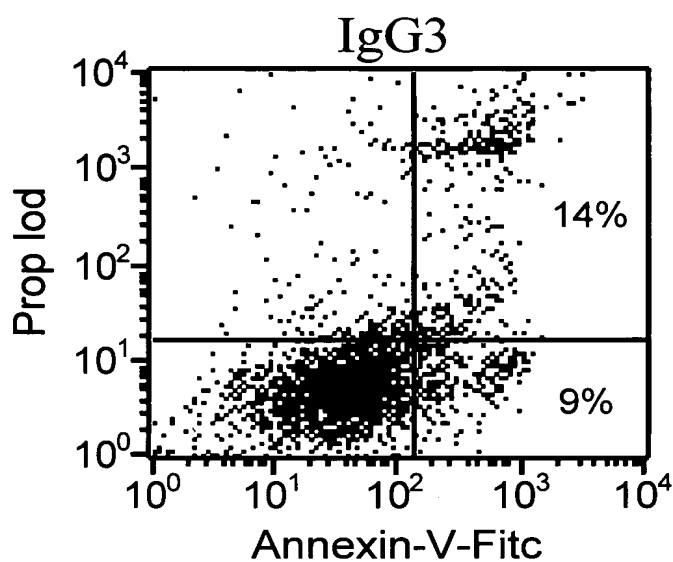


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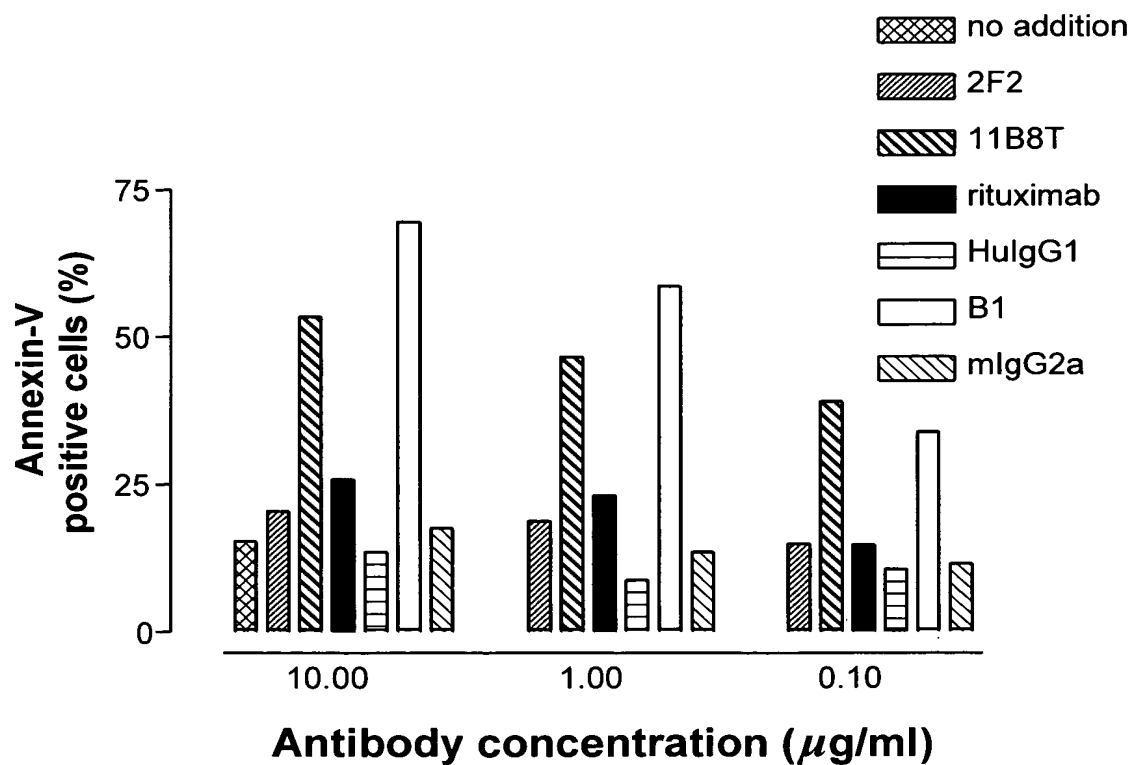


Fig. 34

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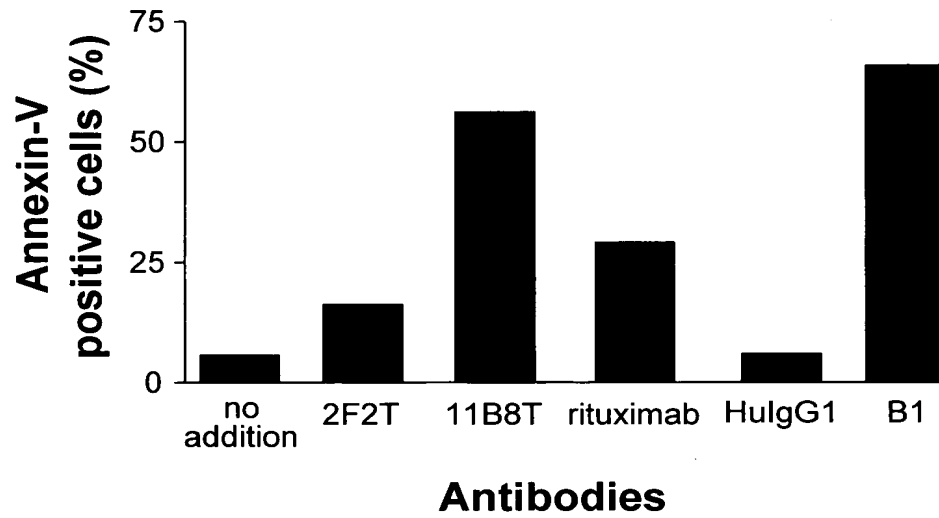
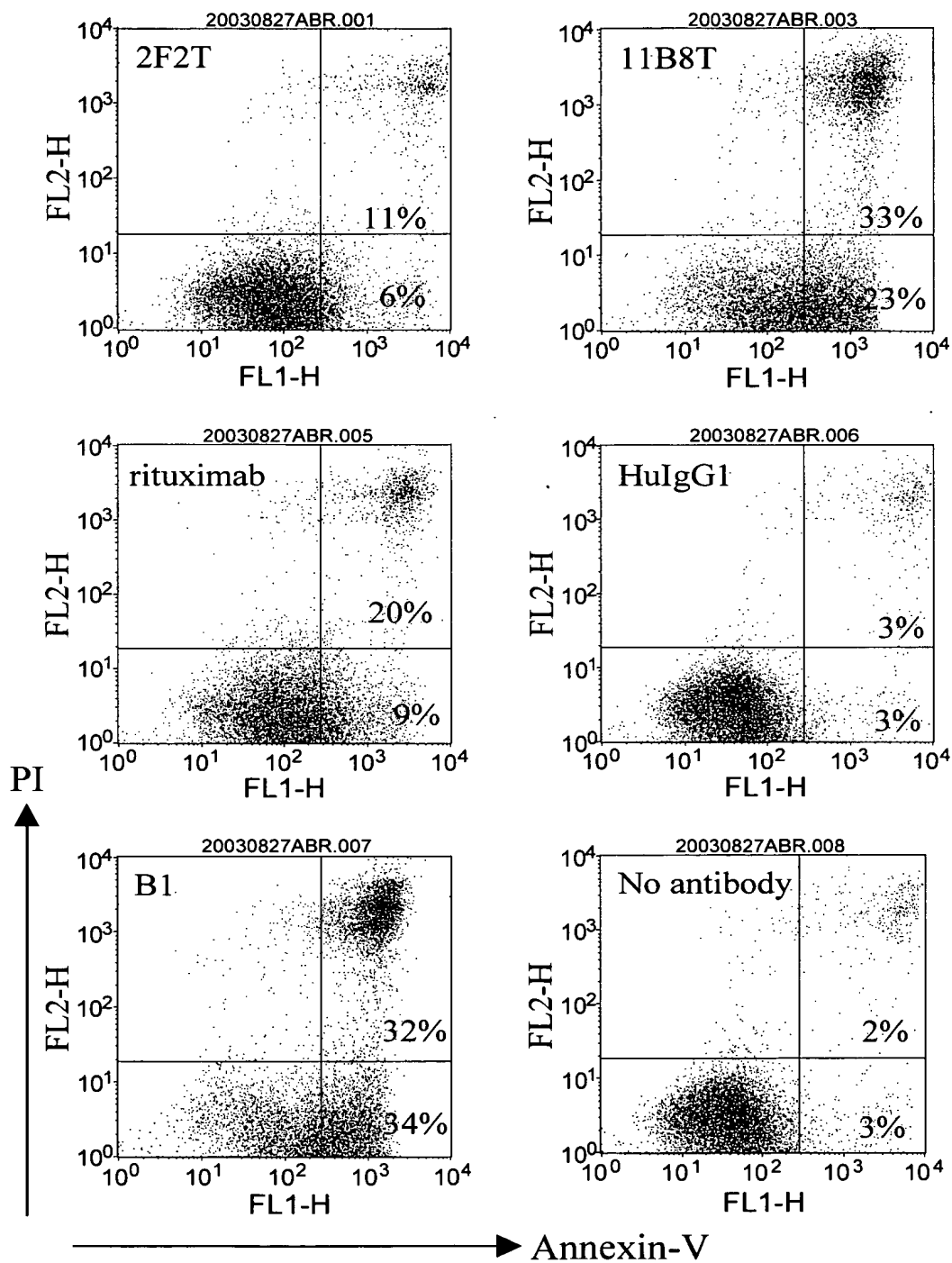


Fig. 35A

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*Fig. 35B*

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Homotypic adhesion of Ramos cells.



Fig. 36A

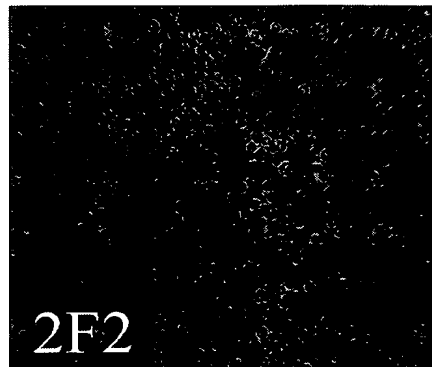


Fig. 36B



Fig. 36C

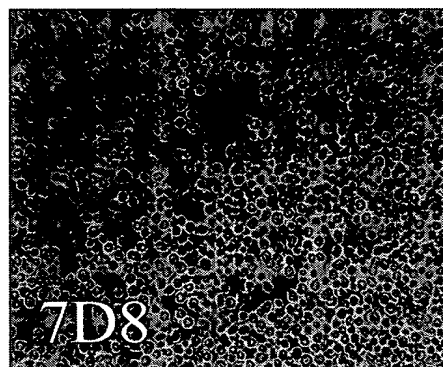


Fig. 36D

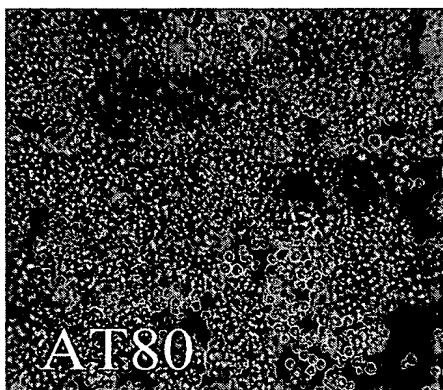


Fig. 36E

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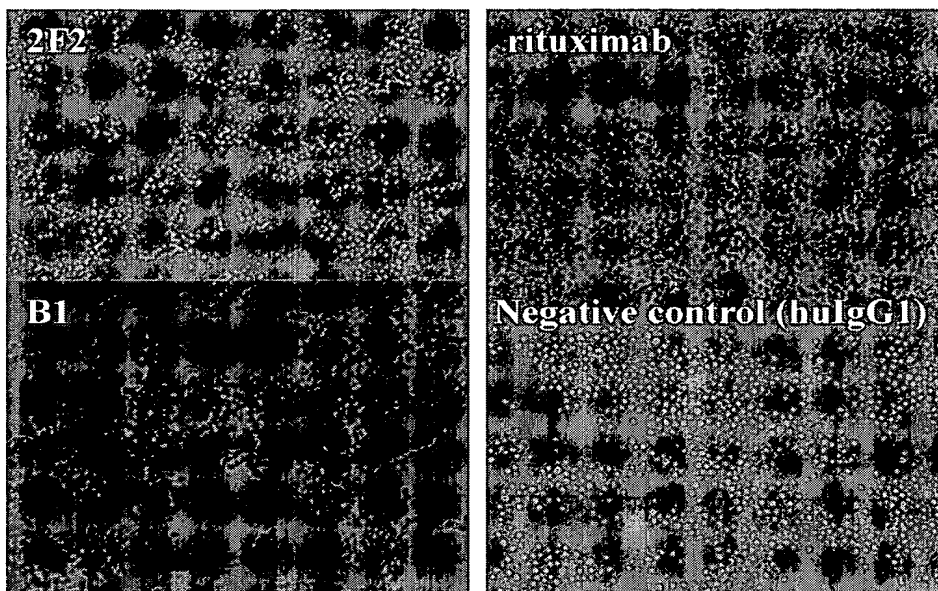


Fig. 37

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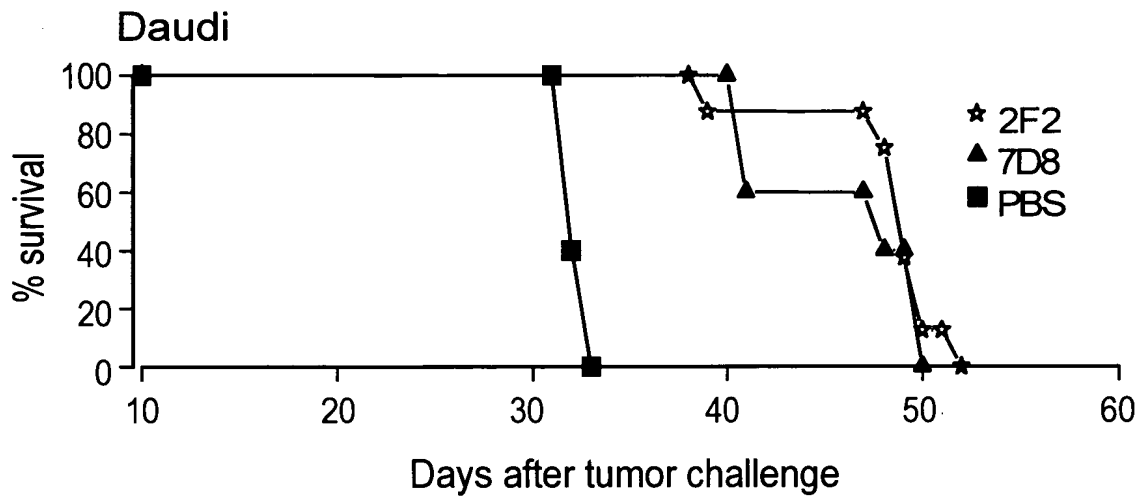


Fig. 38

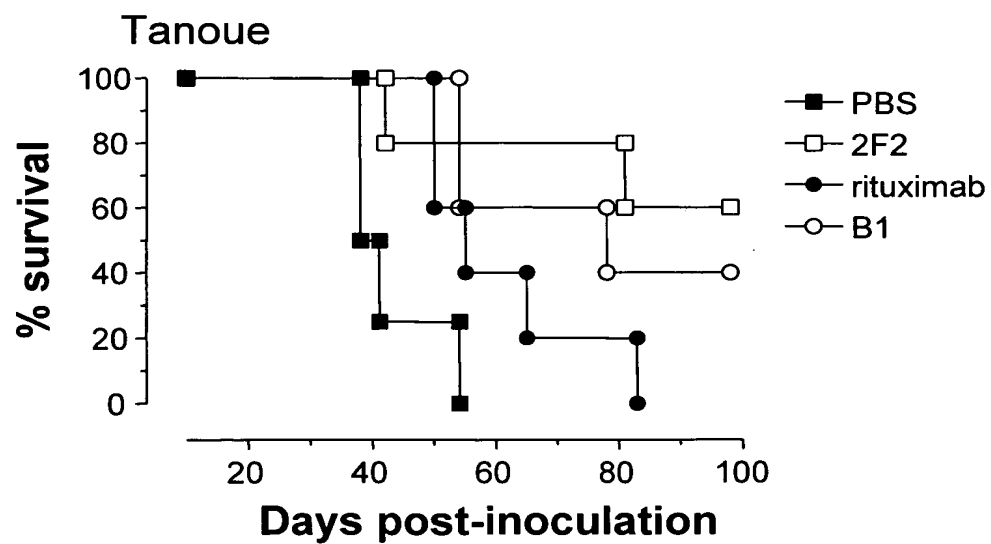


Fig. 39

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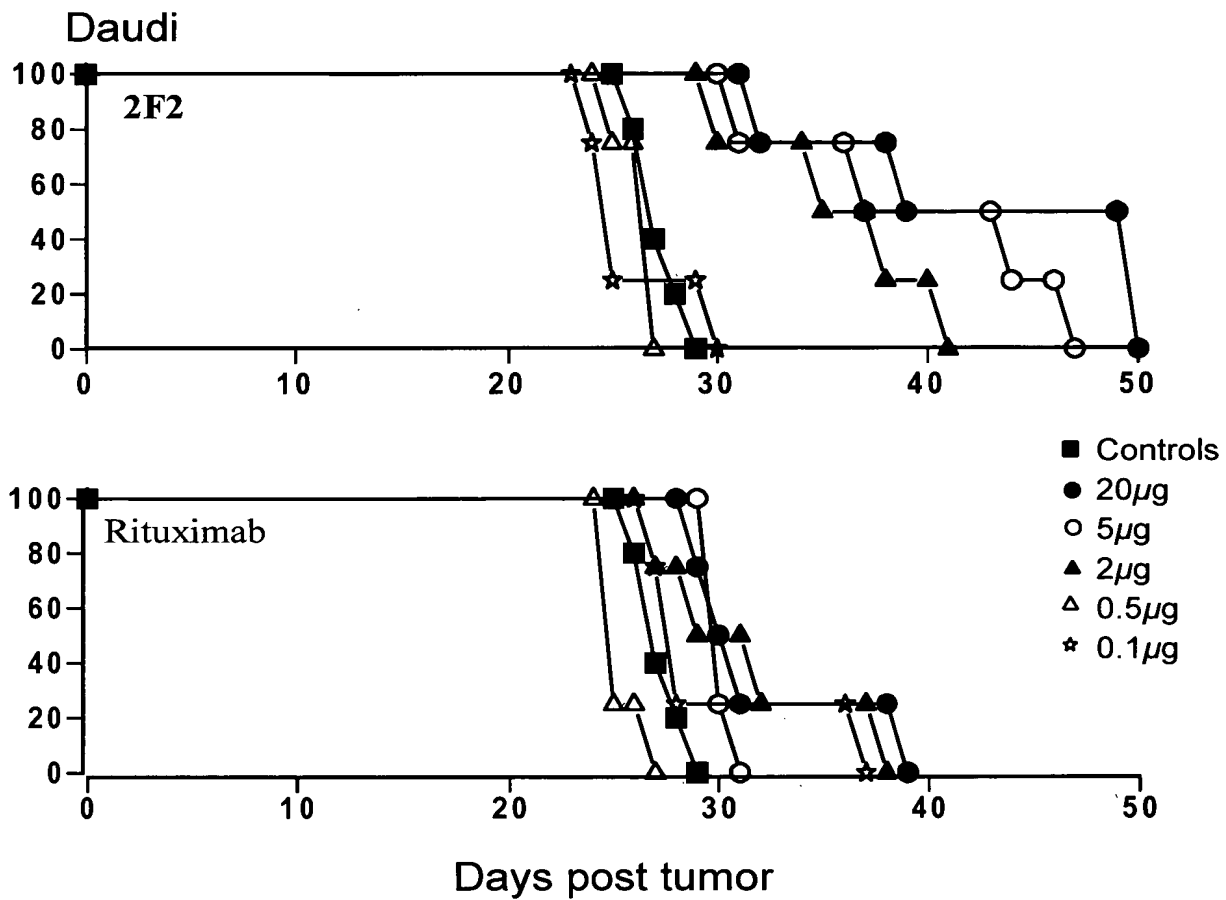
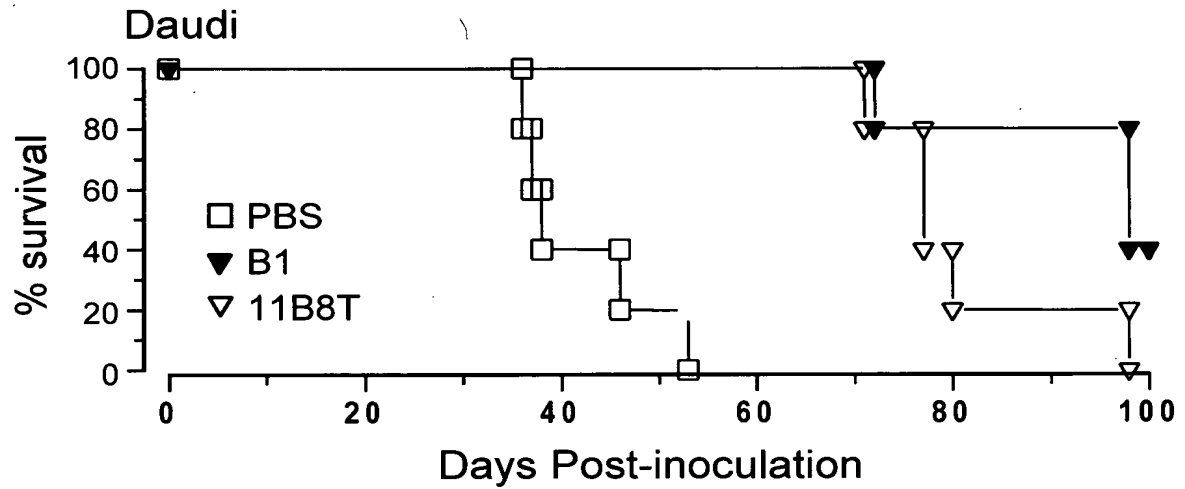


Fig. 40

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*Fig. 41*

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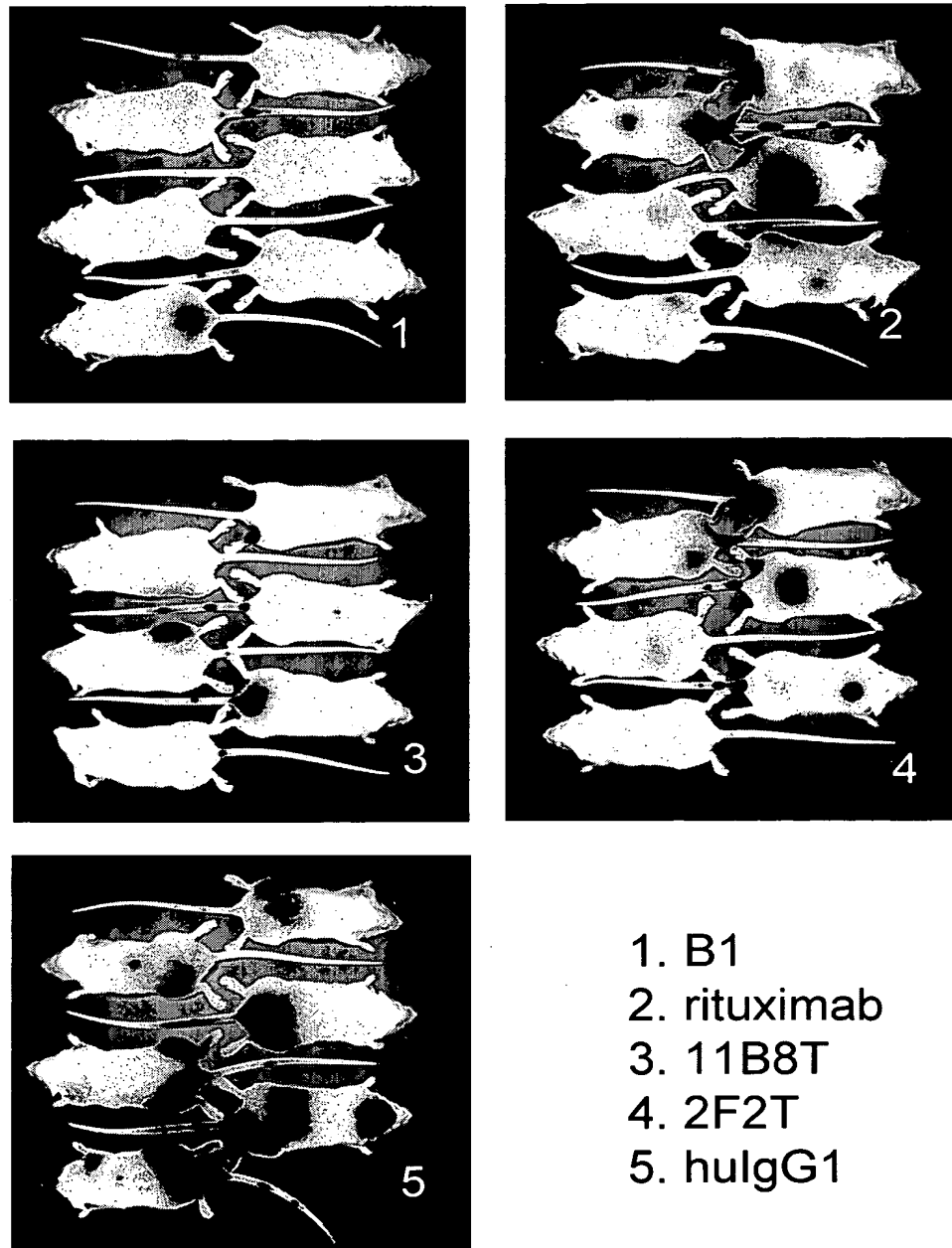
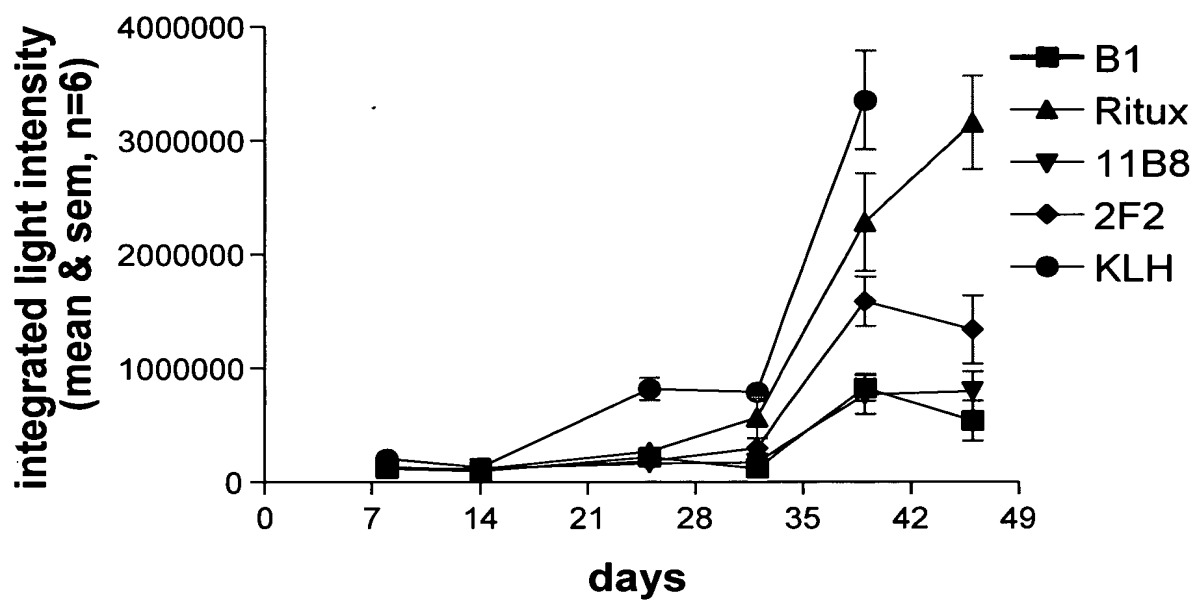
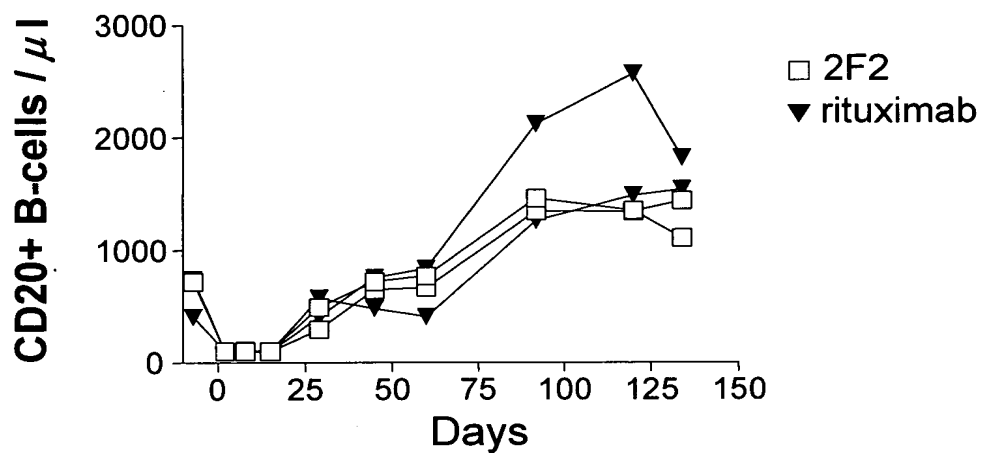
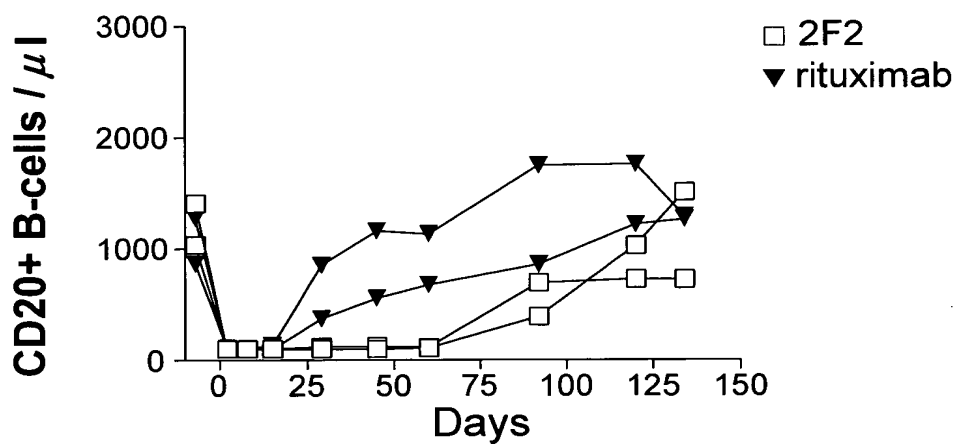
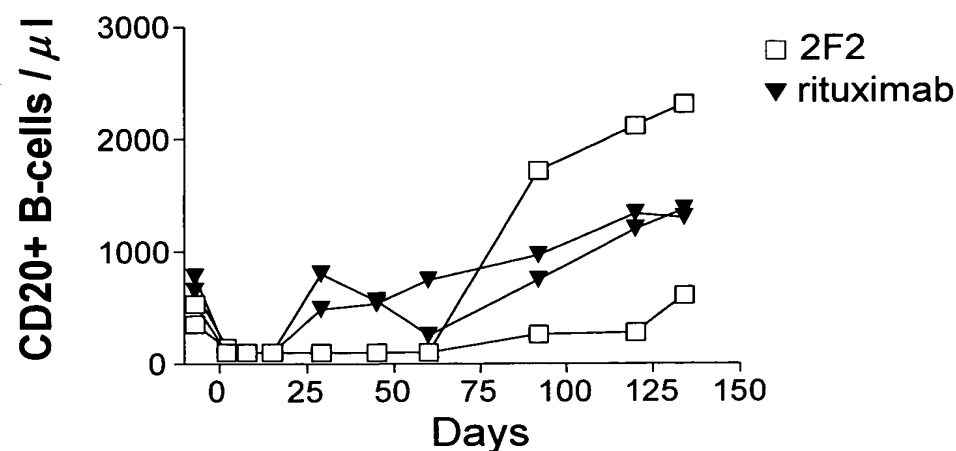


Fig. 42

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*Fig. 44A**Fig. 44B**Fig. 44C*

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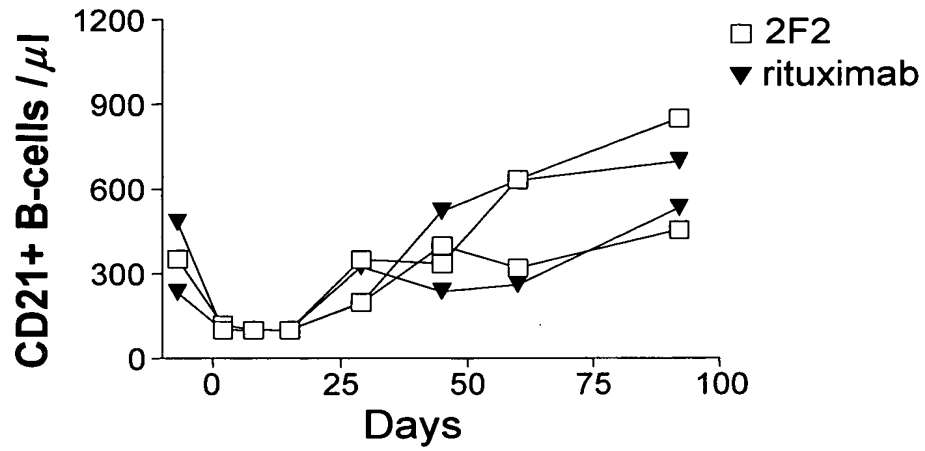


Fig. 45A

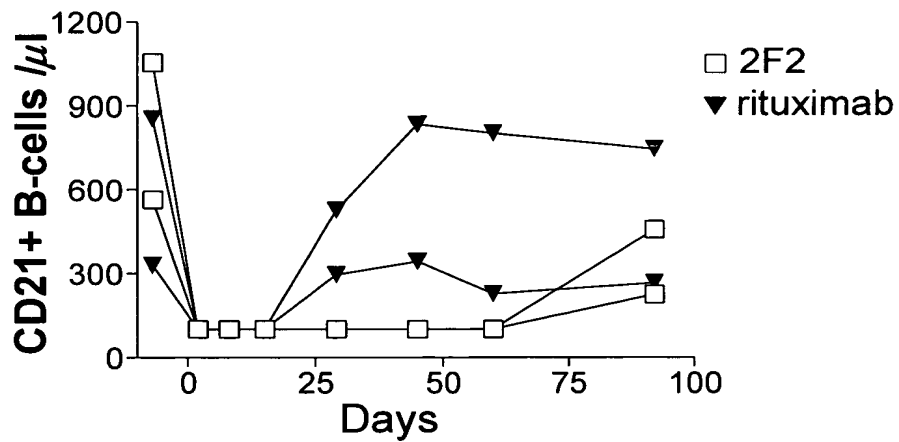


Fig. 45B

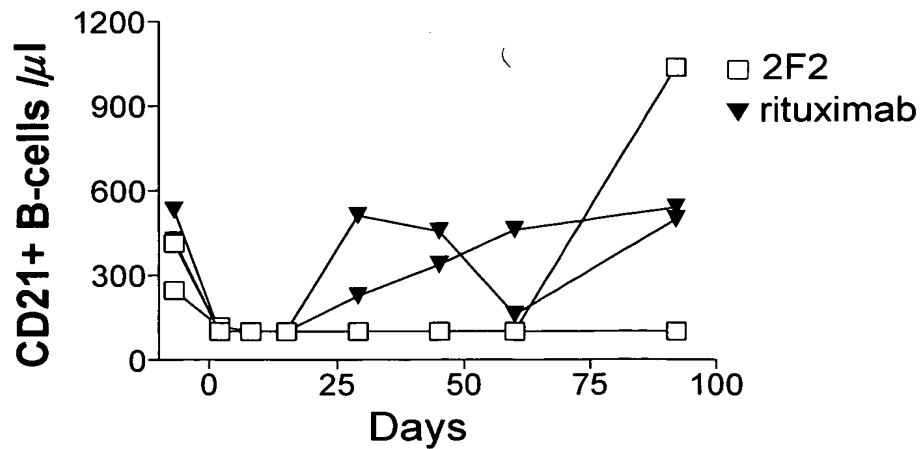


Fig. 45C

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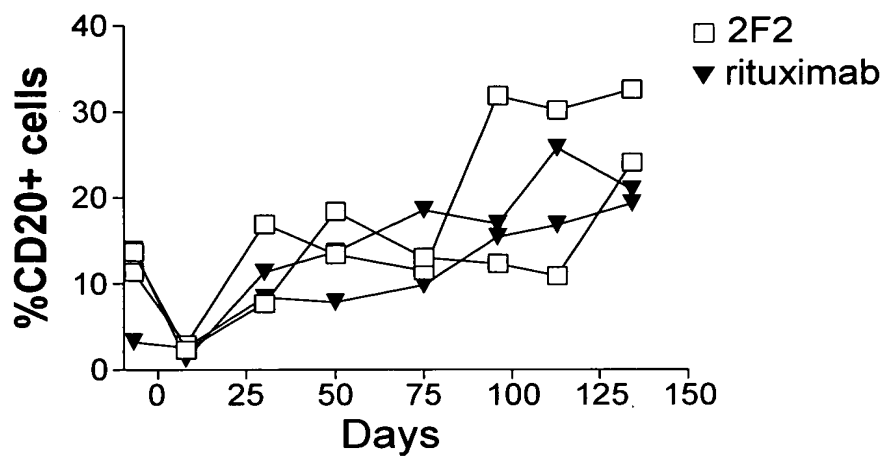


Fig. 46A

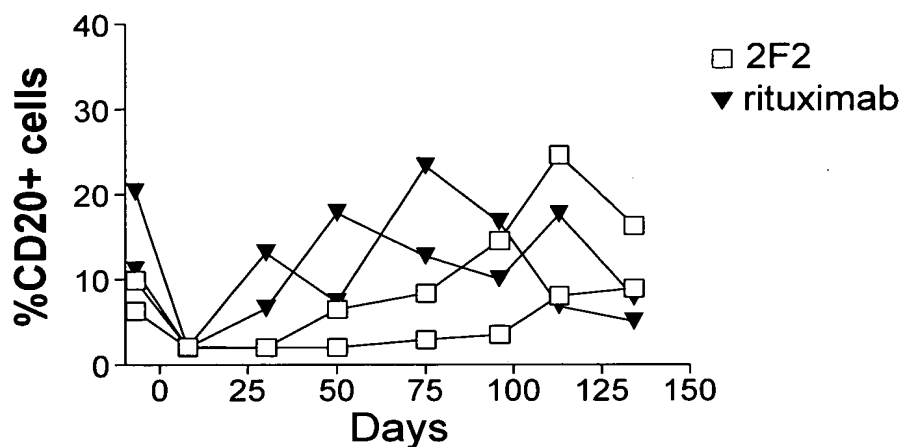


Fig. 46B

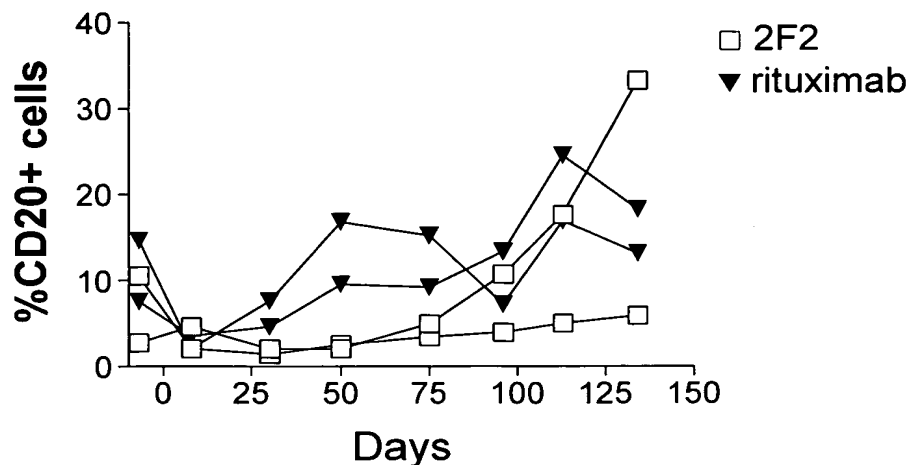


Fig. 46C

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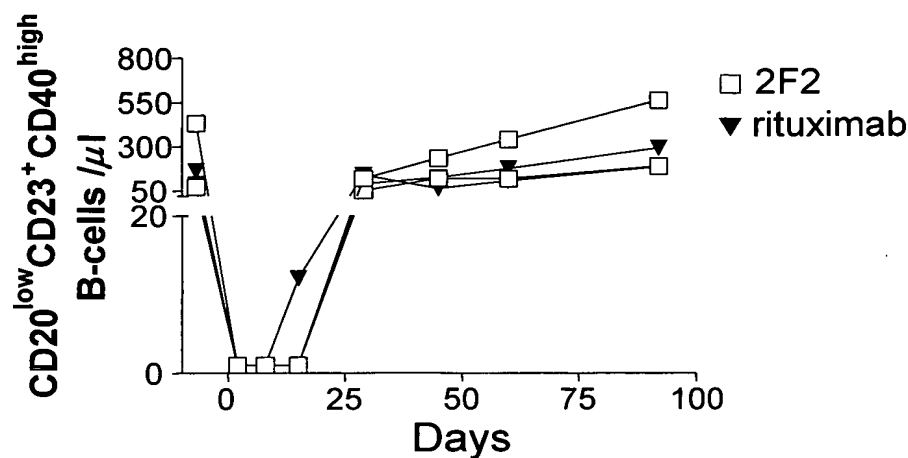


Fig. 47B

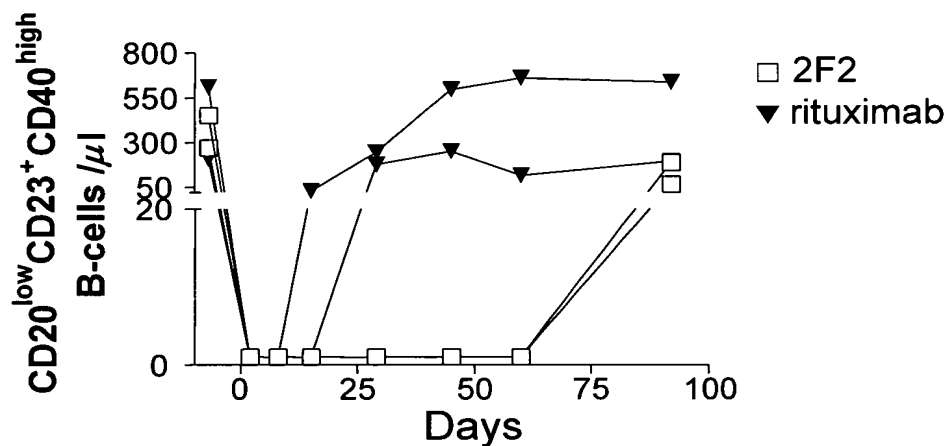


Fig. 47B

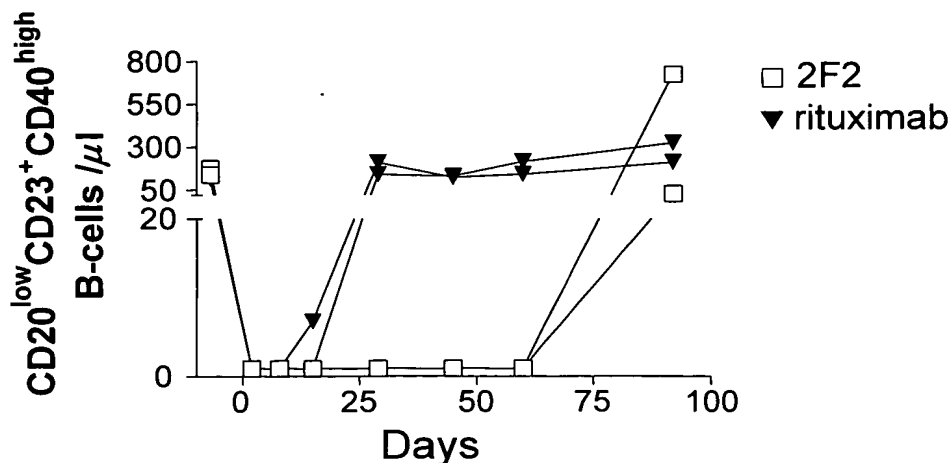


Fig. 47C

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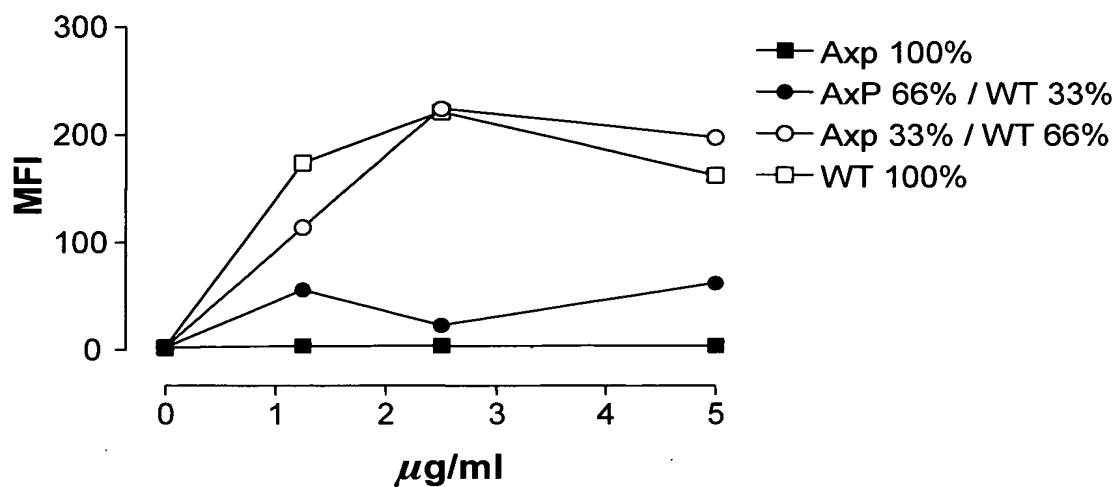


Fig. 48A

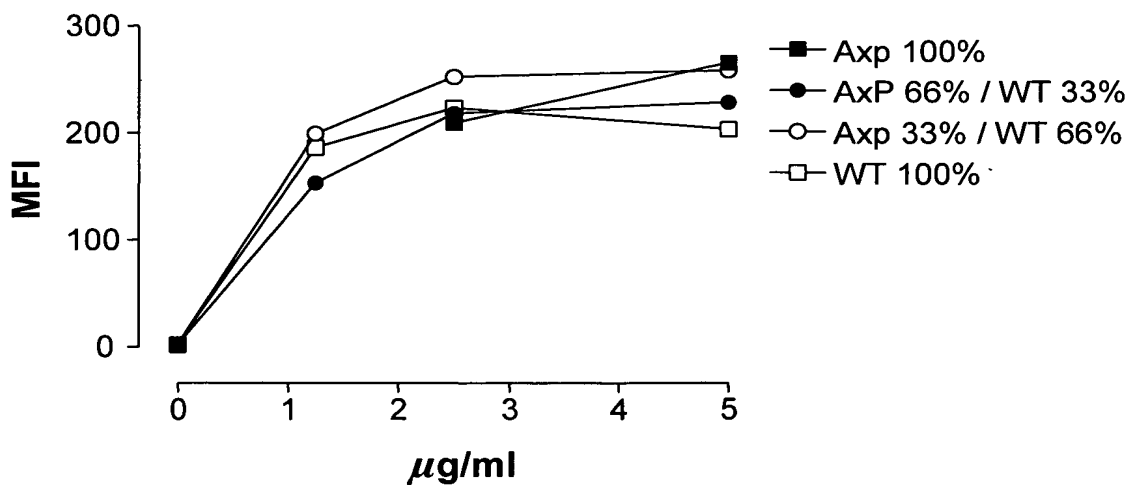


Fig. 48B

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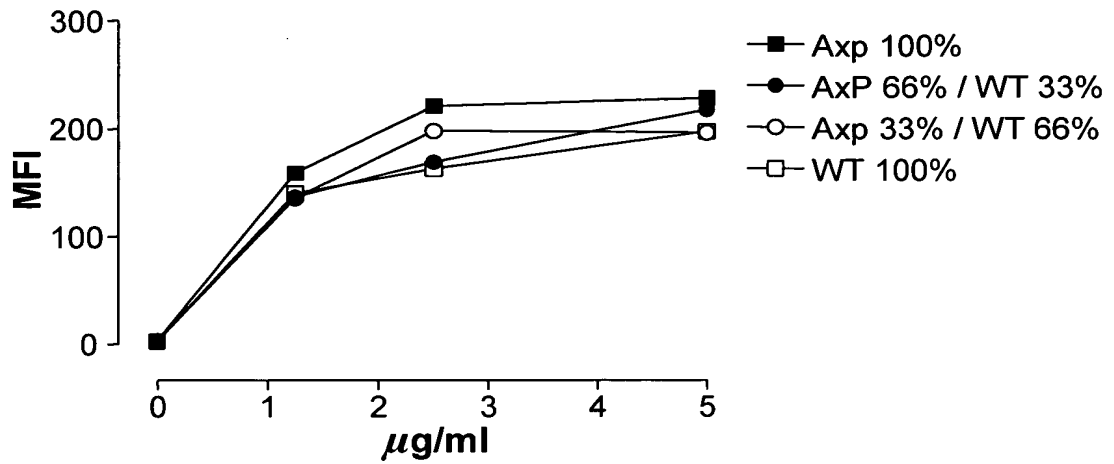


Fig. 48C

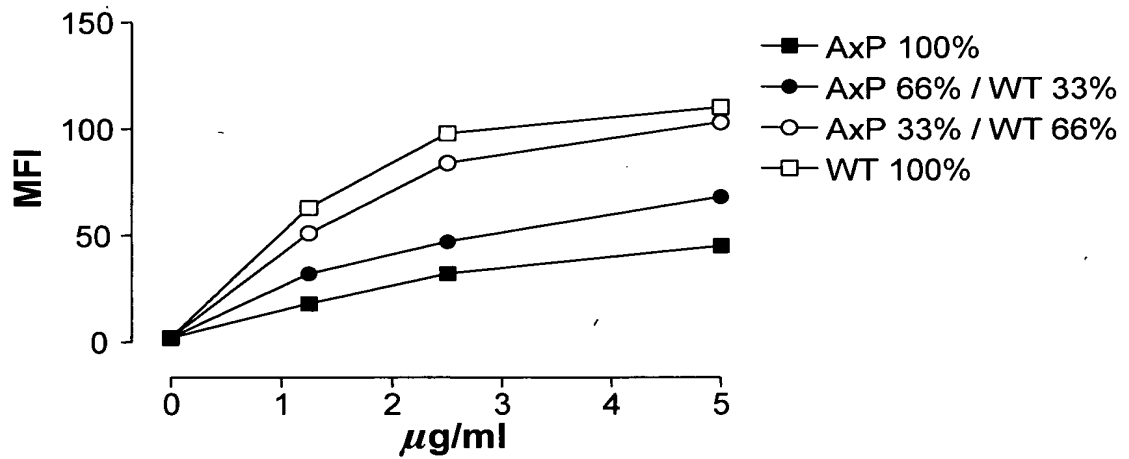


Fig. 48D

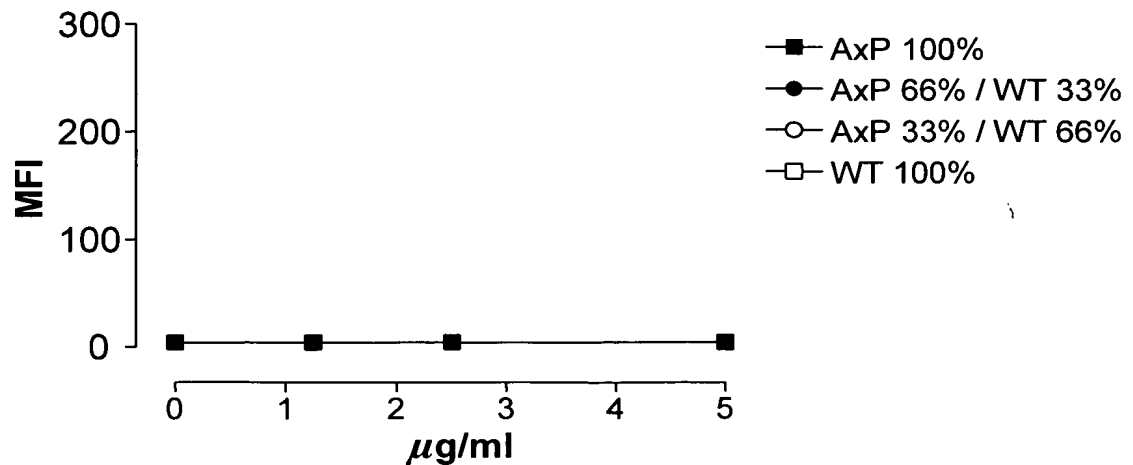


Fig. 48E

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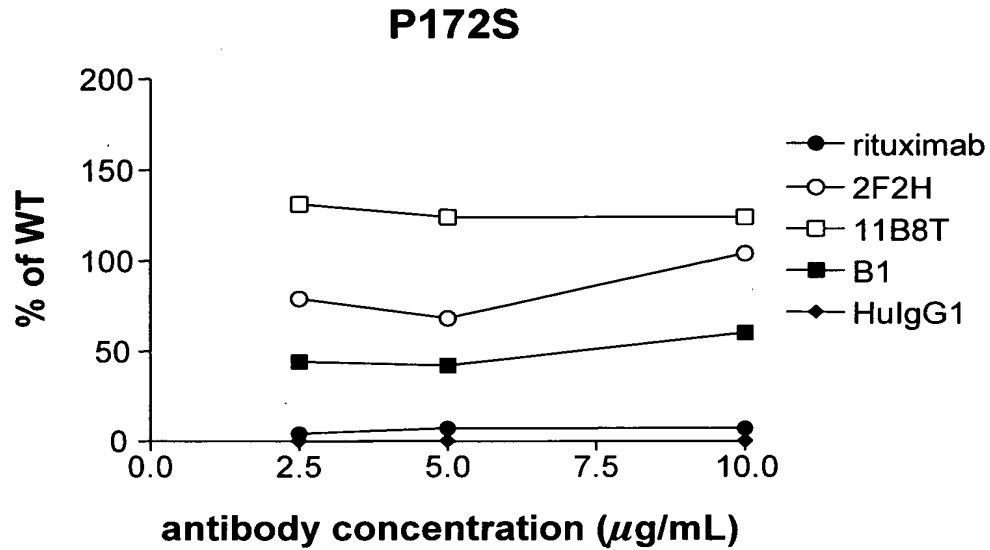


Fig. 49A

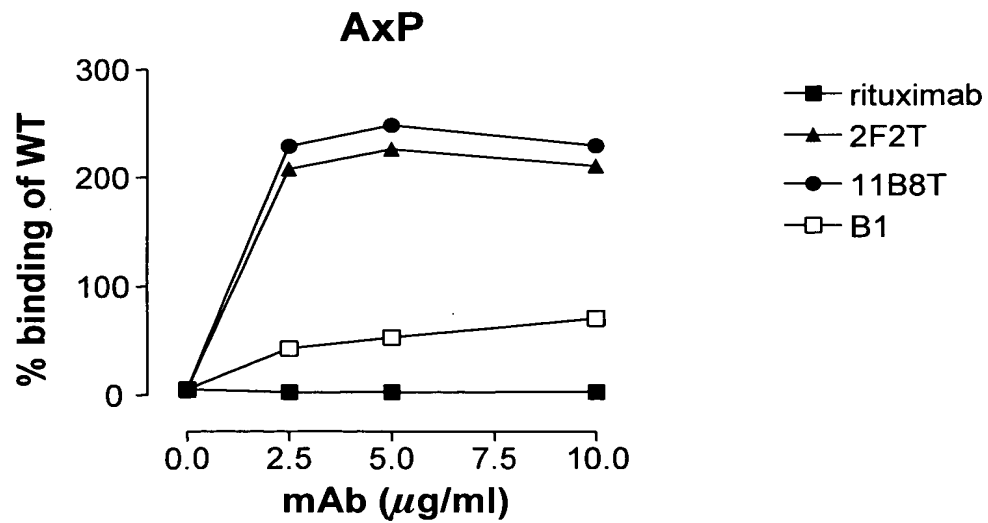


Fig. 49B

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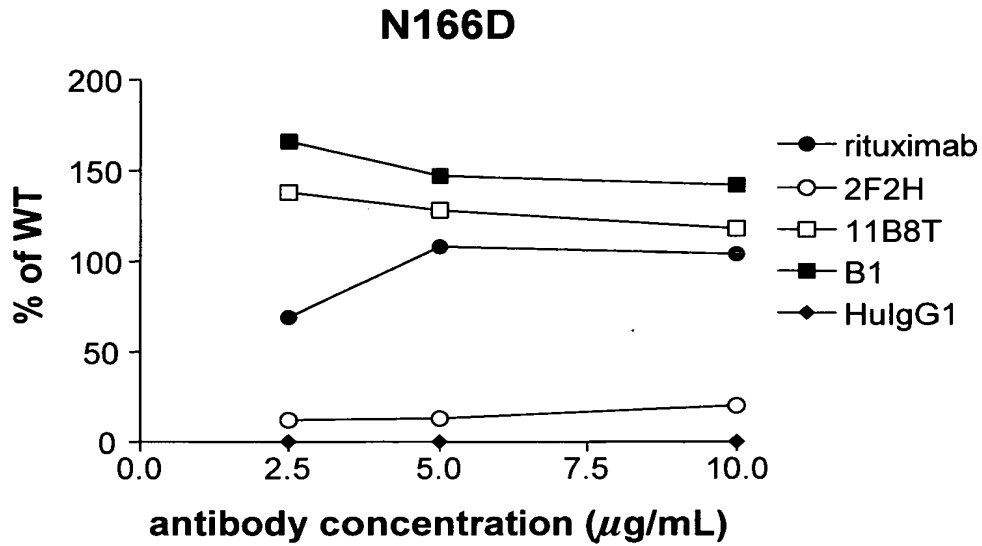


Fig. 49C

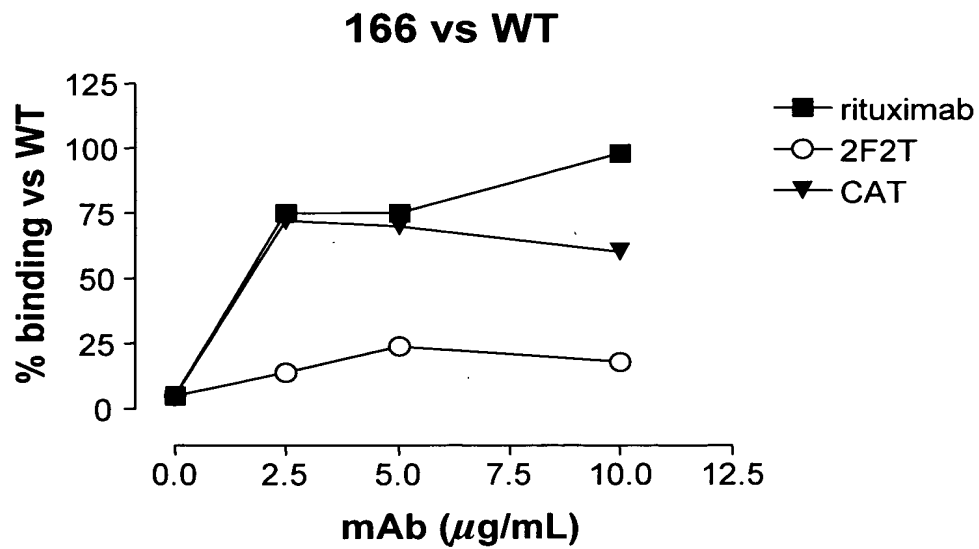
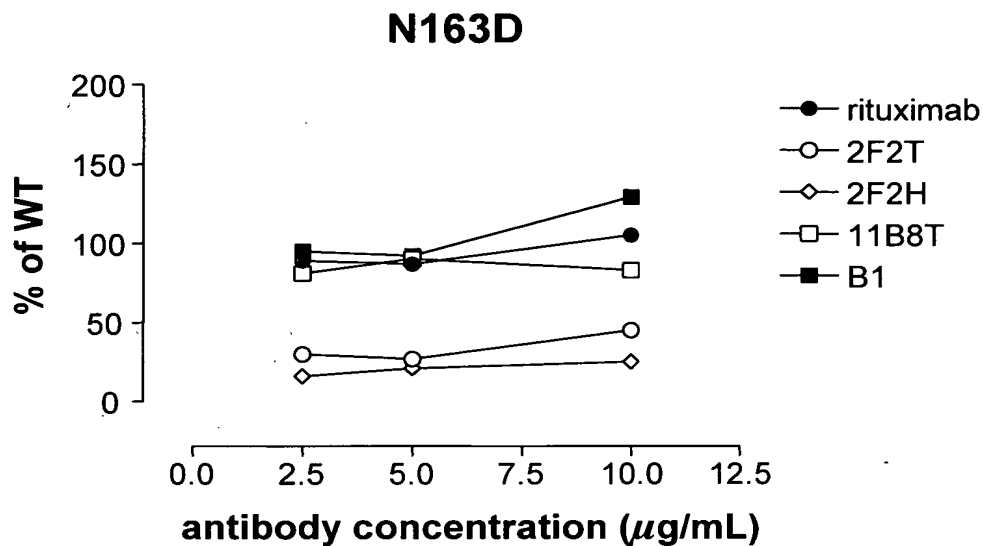
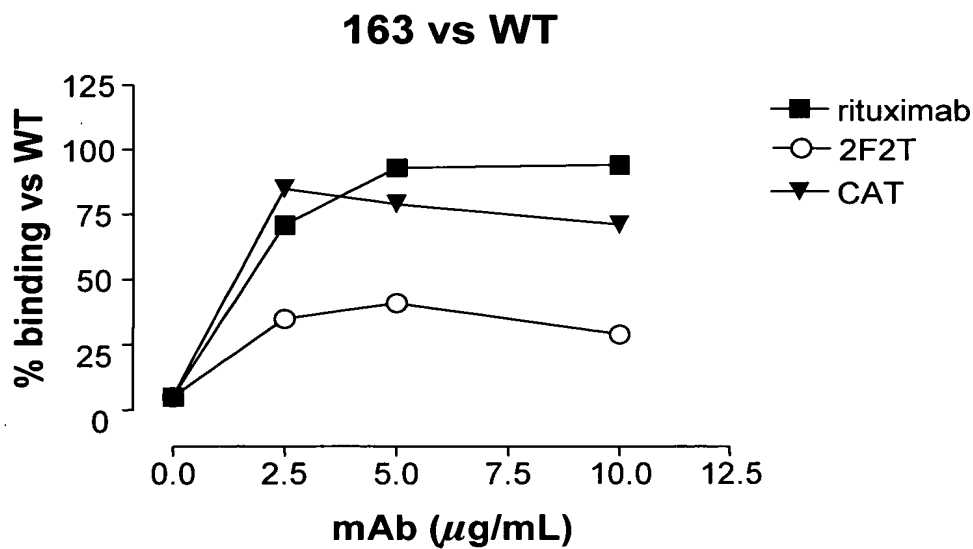


Fig. 49D

57/65*Fig. 49E**Fig. 49F*

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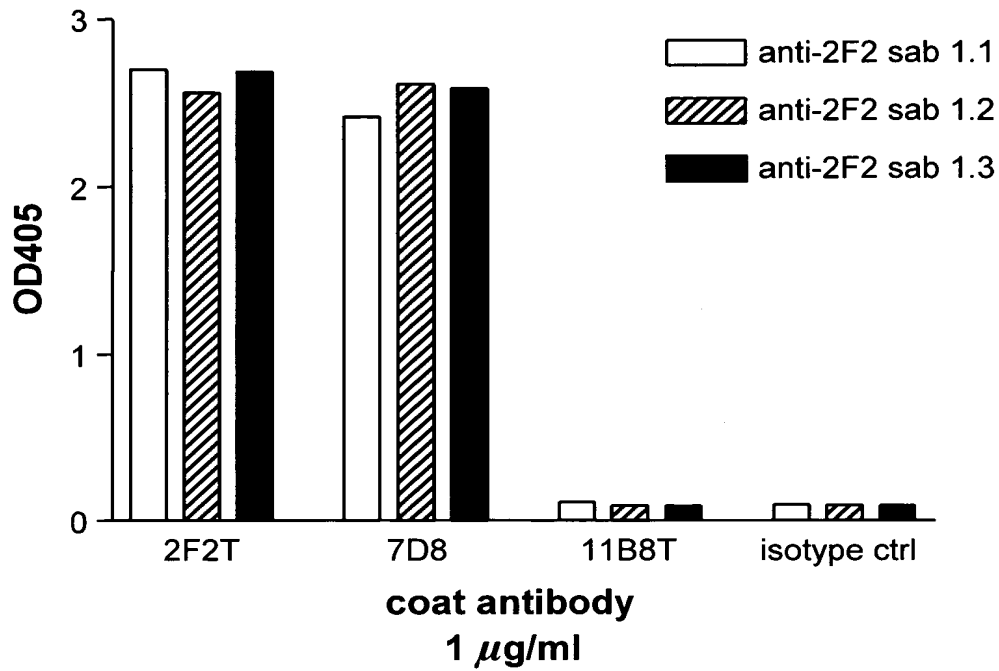


Fig. 50

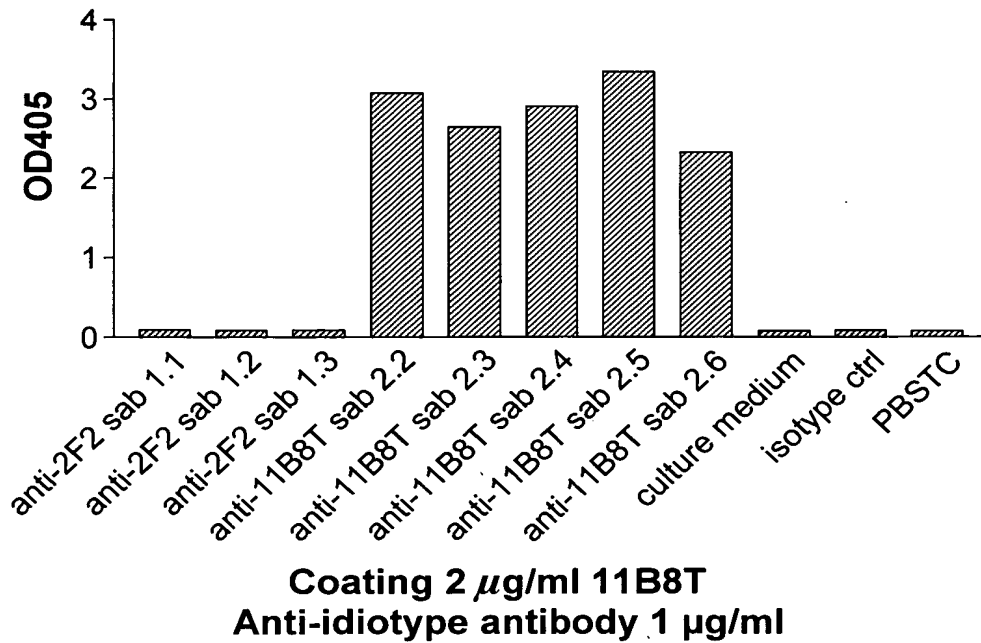


Fig. 51

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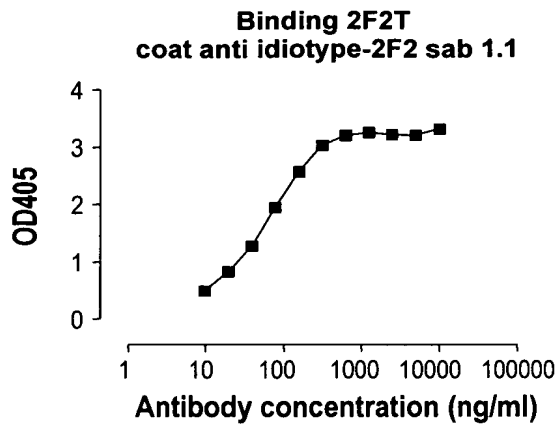


Fig. 52A

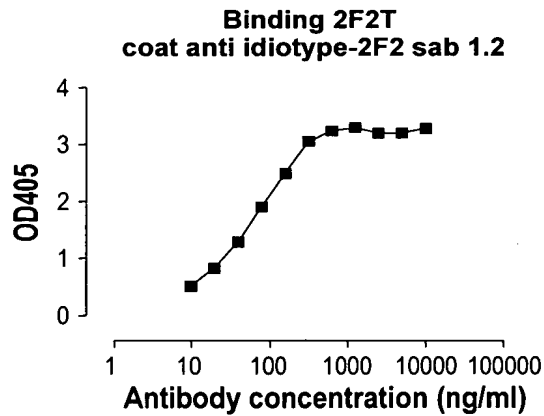


Fig. 52B

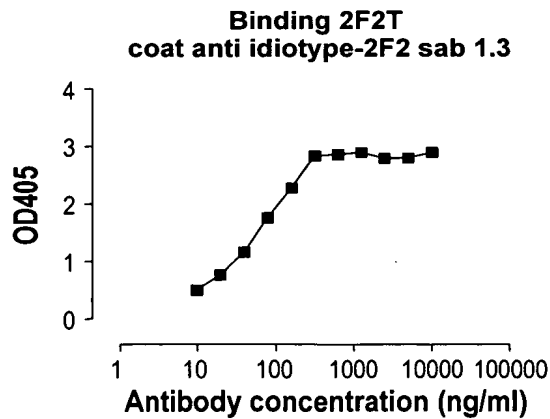


Fig. 52C

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Translation of 2F2 VH

1 MFLGLSWIFL LAILKGQCE VQLVESGGGL VQPGRLRLS CAASGFTFND
51 YAMHWVRQAP GKGLEWVSTI SWNSGSIGYA DSVKGRFTIS RDNAKKSLYL
101 QMNSLRAEDT ALYYCAKDIQ YGNYYYGMDV WGQGTITVTS S

Translation of 2F2VL

1 MEAPAQLLFL LLLWLPDTTG EIVLTQSPAT LSLSPGERAT LSCRASQSVS
51 SYLAWYQQK QAPRLLIYD ASNRATGIPA RFGSGSGTD FTLTSSLEP
101 EDFAVYYCQQ RSNWPIIFGQ GTRLEIK

CDR1

CDR2

CDR3

Fig. 53

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2F2 VH

```
1  ATGGAG TTGGGA CTGAGC TGGATT TTCCTT TTGGCT ATTTTA AAAGGT GTCCAG
55  TGTGAA GTGCAG CTGGTG GAGTCT GGGGA GCTTG GTACAG CCTGGC AGGTCC
109 CTGAGA CTCTCC TGTGCA GCCTCT GGATTC ACCTTT AATGAT TATGCC ATGCAC
163 TGGGTC CGGCAA GCTCCA GGAAG GGCCTG GAGTGG GTCCTA ACTATT AGTTGG
217 AATAGT GGTTC ATAGGC TATCGG GACTCT GTGAAG GGCCGA TTCACC ATCTCC
271 AGAGAC AACGCC AAGAAG TCCCTG TATCTG CAAATG AACAGT CTGAGA GCTGAG
325 GACACG GCCTTG TATTAC TGTGCA AAAGAT ATACAG TACGGC AACCTAC TACTAC
379 GGTATG GACGTC TGGGGC CAAGGG ACCACG GTCACC GTCCTC TCAG
```

2F2VL

```
1  ATGGAA GCCCCA GCTCAG CTTCTC TTCCTC CTGCTA CTCTGG CTCCCA GATACC
55  ACCGGA GAAATT GTGTTG ACACAG TCTCCA GCCACC CTGTCT TTGTCT CCAGGG
109 GAAAGA GCCACC CTCTCC TGCAGG GCCAGT CAGAGT GTTAGC AGCTAC TTAGCC
163 TGGTAC CAACAG AAACCT GGCCAG GCTCCC AGGCTC CTCATC TATGAT GCATCC
217 AACAGG GCCACT GGCATC CCAGCC AGGTTT CGTGGC AGTGGG TCTGGG ACAGAC
271 TTCACT CTCACC ATCAGC AGCCTA GAGCCT GAAGAT TTTGCA GTTTAT TACTGT
325 CAGCAG CGTAGC AACTGG CCGATC ACCTTC GGCCAA GGGACA CGACTG GAGATT
379 AAAC
```

Fig. 54

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Translation of 7D8VH

1 MELGLSWIFL LAILKGVQCE VQLVESGGGL VQPDRLRLS CAASGFTFHD
51 YAMHWVRQAP GKGLEWVSTI SWNSGTIGYA DSVKGRFTIS RDNAKNSLYL
101 QMNSLRAEDT ALYYCAKDIQ YGNVYVYGMDV WQGTTVTVS S

Translation of 7D8VL

1 MEAPAQLLFL LLLWLPDTTG EIVLTQSPAT LSLSPGERAT LSCRASQSVS
51 SYLAWYQQKP GAAPRLLIYD ASNRATGIPA RFGSGSGTD FTLTSSLEP
101 EDFAVYCCQ RSNWFLIFGQ GTRLEIK

CDR1
CDR2
CDR3

Fig. 55

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7D8VH

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1  ATGGAG TTGGGA CTGAGC TGGATT TTCCCTT TTGGCT ATTTTA AAAGGT GTCCAG
55  TGTGAA GTGCAG CTGGTG GAGTCT GGGGA GCTTG GTACAG CCTGAC AGGTCC
109 CTGAGA CTCTCC TGTGCA GCCTCT GGATTC ACCTTT CATGAT TATGCC ATGCAC
163 TGGGTC CGGCAA GCTCCA GGAAG GGCCTG GAGTGG GTCTCA ACTATT AGTTGG
217 AATAGT GTACC ATAGGC TATGCG GACTCT GTGAAG GGCCGA TTCACC ATCTCC
271 AGAGAC AACGCC AAGAAC TCCCTG TATCTG CAAATG AACAGT CTGAGA GCTGAG
325 GACACG GCCTTG TATTAC TGTGCA AAAGAT ATACAG TACGGC AACTAC TACTAC
379 GGTATG GACGTC TGGGCG CAAGGG ACCACG GTCACC GTCTCC TCAG
```

7D8VH

```
1  ATGGAA GCCCCA GCTCAG CTTCTC TTCCCTC CTGCTA CTCTGG CTCCCA GATACC
55  ACCGGA GAAATT GTGTTG ACACAG TCTCCA GCCACC CTGTCT TTGTCT CCAGGG
109 GAAAGA GCCACC CTCCTC TGCAGG GCCAGT CAGAGT GTTAGC AGCTAC TTAGCC
163 TGGTAC CAACAG AAACCT GGCCAG GCTCCC AGGCTC CTCATC TATGAT GCATCC
217 AACAGG GCCACT GGCATC CCAGCC AGGTC AGTGGC AGTGG TCTGG ACAGAC
271 TTCCTC CTCACC ATCAGC AGCCTA GAGCCT GAAGAT TTTGCA GTTAT TACTGT
325 CAGCAG CGTAGC AACTGG CCGATC ACCTTC GGCCAA GGGACA CGACTG GAGATT
379 AAAC
```

Fig. 56

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Translation of VHCD2011B8

1 MELGLSWVFL VAILKGVQCE VQLVQSGGL VHPGGLRLS CTGSGFTFSY
51 HAMEWVRQAP GKGLEWVSI GTGGVTTYAD SVKGRFTISR DNVKNSLYLQ
101 MNSLRAEDMA VYYCARDYDG AGSFYDGLYG MDVWGQGT TVSS

Translation of VLCD2011B8

1 MEAPAQLLFL LLLWLPDTTG EIVLTQSPAT LSLSPGERAT LSCRASQSVS
51 SYLAWYQOKP GOAPRLIYD ASNRATGIPA RFGSGSGTD FTLTSSLEP
101 EDFAVYYCQQ RSDWPLIFGG GTKVEIK

CDR1
CDR2
CDR3

Fig. 57

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VHCD2011B8

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1  ATGGAG TTGGGG CTGAGC TGGGTT TTCCTT GTTGCT ATATTA AAAGGT GTCCAG
55  TGTGAG GTTCAG CTGGTG CAGTCT GGGGGA GGCTTG GTACAT CCTGGG GGGTCC
109 CTGAGA CTCTCC TGTACA GGCTCT GGATTC ACCTTC AGTTAC CATGCT ATGCAT
163 TGGGTT CGCCAG GCTCCA GGAAAA GTCTG GAATGG GTATCA ATTATT GGGACT
217 GGTGGT GTCACA TACTAT GCAGAC TCCGTG AAGGGC CGATTC ACCATC TCCAGA
271 GACAAT GTCAAG AACTCC TTGTAT CTTCAA ATGAAC AGCCTG AGAGCC GAGGAC
325 ATGGCT GTGTAT TACTGT GCAAGA GATTAC TATGGT GCGGGG AGTTT TATGAC
379 GGCCTC TACGGT ATGGAC GTCTGG GGCCAA GGGACC ACGGTC ACCGTC TCCTCA
433  G
```

VLCD2011B8

```
1  ATGGAA GCCCCA GCACAG CTCTCT TTCCTC CTGCTA CTCTGG CTCCCA GATACC
55  ACCGGA GAAATT GTGTG ACACAG TCTCCA GCCACC CTGTCT TTGTCT CCAGGG
109 GAAAGA GCCACC CTCTCC TGCAGG GCCAGT CAGAGT GTTAGC AGCTAC TTAGCC
163 TGGTAC CAACAG AAACCT GGCCAG GTCCTC AGGCTC CTCATC TATGAT GCATCC
217 AACAGG GCCACT GGCATC CCAGCC AGGTTT AGTGGC AGTGGG TCTGGG ACAGAC
271 TTCACT CTCACC ATCAGC AGCCTA GAGCCT GAAGAT TTGCA GTTTAT TACTGT
325 CAGCAG CGTAGC GACTGG CCGCTC ACTTTC GCGCGA GGGACC AAGGTG GAGATC
379  AAAC
```

Fig. 58